

GRUNDFOS **CUE**

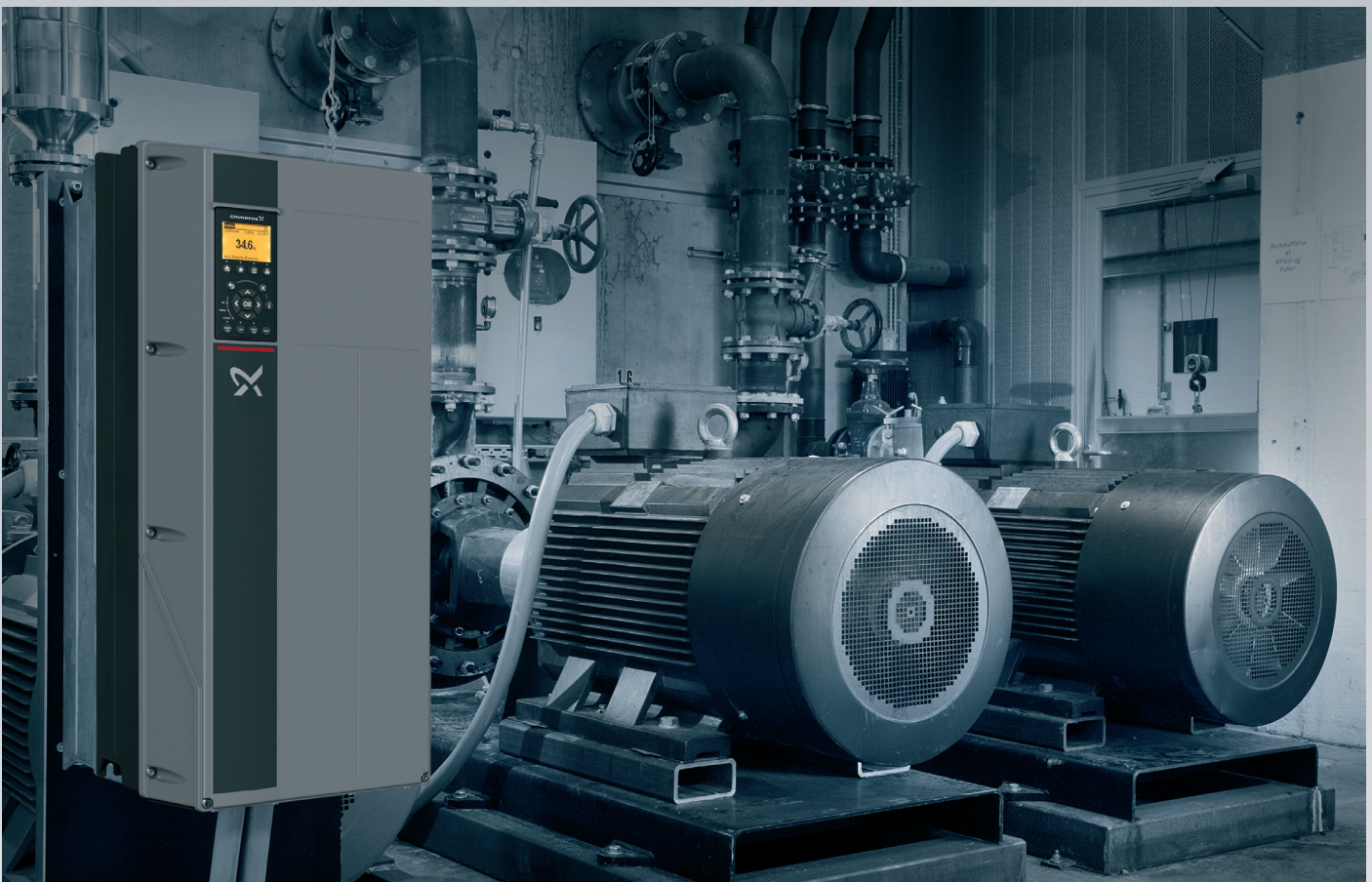
Easy installation, control and optimization of pumps and systems



Maximum convenience through an intuitive interface

The Grundfos CUE is a variable frequency drive for the effective speed control of any Grundfos pump without integrated drives, irrespective of size or area of application.

Offering simple installation and operation coupled with extensive control and monitoring possibilities, Grundfos CUE is perfectly suited for pump applications in municipalities, buildings or industrial settings.



Pump family settings

A unique feature uses pre-programmed data for different Grundfos pump families. During installation, the correct values are set for specific pumps for optimum performance and protection of the pump.

Control mode

Grundfos CUE provides a series of pre-defined application control modes:

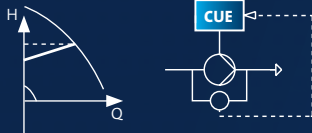
- Constant pressure with or without stop function
- Proportional differential pressure

- Constant level with or without stop function
- Constant temperature
- Proportional pressure

These pre-defined control modes make it simple to program the drive for the application. When controlled from an external source, the open loop control mode is used, supplying Grundfos CUE with information about the required speed.

CONTROL MODE

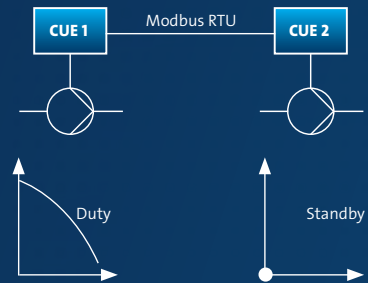
PROPORTIONAL PRESSURE



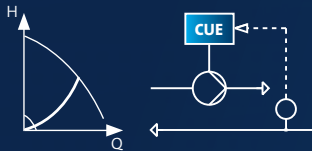
CONSTANT LEVEL



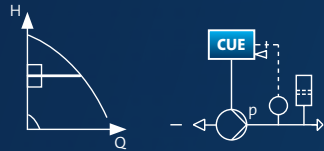
DUTY/STANDBY OR DUTY/ASSIST



TEMPERATURE CONTROL



CONSTANT PRESSURE



Intuitive start-up guide

For easy set-up, Grundfos CUE has a comprehensive start-up guidance that asks for your pump type, motor type, control mode, sensor type, setpoint and multi-pump mode inputs for commissioning. Grundfos CUE will then automatically set all necessary parameters.

Furthermore, the advanced graphical panel features:

- Favorites menu for one stop adjustment of setpoint, operating mode and control mode.
- Main menu with password protection for advanced commissioning and troubleshooting without the need for additional tools.
- Info key with comprehensive descriptions for easy settings and status – no manual required.
- Logging for tuning the performance of the pump system.

Lowest operating cost

The Grundfos CUE provides a high pump system efficiency through the integration of energy-efficient motors and pumps. The CUE controls both asynchronous induction motors and permanent magnet motors.

Contributing to water-use efficiency

At Grundfos, our water and climate ambitions are to do whatever we can to help achieve the United Nations Sustainable Development Goals, in particular SDG 6.

Speed-controlled pumps contribute strongly to water-use efficiency across all sectors, which directly contributes to SDG 6 to ensure there is clean water and sanitation for all people.



Connect to the future of intelligent pump systems

Grundfos brings a new era of intelligence to pump systems and water technology with solutions that look beyond individual components and optimize the entire system.

Powered by our deep understanding of water, Grundfos uses intelligent pumps, sensors and monitoring services to enable real-time monitoring, remote control, optimization to help you reach a new level of performance.

Superior performance through unique functionality

Grundfos CUE offers greater functionality, making it easy to use in a wide range of complex applications. The features listed below are pump type dependent.

- **Multi-pump function including alternating, back-up or cascade function**

The Multi-pump function makes it possible to control more parallel-coupled pumps without the need for an external controller. Four different multi-pump functions are available: Alternating time, Back-up, and Cascade control with either fixed or variable speed assist pumps.

- **Differential pressure control using two sensors**

Use two sensors instead of one differential sensor for running in differential pressure.

- **Proportional pressure and flow estimation**

Proportional pressure control on pumps with user adjustable control curve for pressure loss compensation.

- **Low flow stop function**

Improved energy optimization, easy configuration and high comfort.

- **Dry running protection**

Protects the pump against failure due to dry running.

- **Limit Exceed function**

The pump reacts to a measured or an internal value exceeding a user-defined limit. The pump can either give an alarm/warning or change the operating mode, reducing the need for external controllers.

- **Setpoint influence**

The setpoint influence function makes it possible to influence the controller setpoint using measured values.

- **Standstill heating (anti-condensation heating)**

Standstill heating ensures that even during standstill periods, the motor windings are kept at a minimum temperature – heating both motor and terminal box.



Dedicated functionality for Water Utilities

With dedicated functionality for water and wastewater networks, Grundfos CUE ensures fully optimized operation in these applications.

WATER NETWORKS

- **Pipe fill mode**
Improve system reliability and prevent water hammering. Designed for both vertical and horizontal pipe systems to increase system performance and prevent water hammer in the application.
- **Low flow stop function**
Improved energy optimization, easy configuration and high comfort.
- **Built-in cascade control of two fixed-speed pumps**
Increase flow by simple cascade option of up to two fixed speed pumps, easy set-up from the start-up guide.

WASTEWATER NETWORKS

- **High overload and constant torque**
The torque characteristic is normally set to variable torque for centrifugal pumps. However, Grundfos CUE offers a constant torque characteristic optimized for:
 - higher starting torque,
 - axial pumps and positive displacement pumps, or
 - load shocks in wastewater pumps.
- **Stop at minimum speed function**
Ensures the pump will stop after a selected time when the controller is saturated, forcing the pump to run at minimum speed.
- **Deragging**
By preventing clogged impellers and getting rid of debris, less ragging prolongs pump lifetime and reduces service costs.



Technical specifications

Built-in I/O	Yes
Digital inputs:	4
Digital inputs/outputs:	2
Relay outputs:	2
Analog inputs:	1 dedicated for sensor, 1 dedicated for external setpoint
Analog output:	1
RS-485:	GENIbus, Modbus RTU, and multi-pump

Accessories

MCB114 sensor input module

Required for using differential pressure control using two sensors, or two Pt100/1000 inputs to be used in connection with motor bearings temperature measurement, or temperature measurement such as the media temperature.

MCO101 cascade option module

Required for cascade of more than one additional variable speed pump.

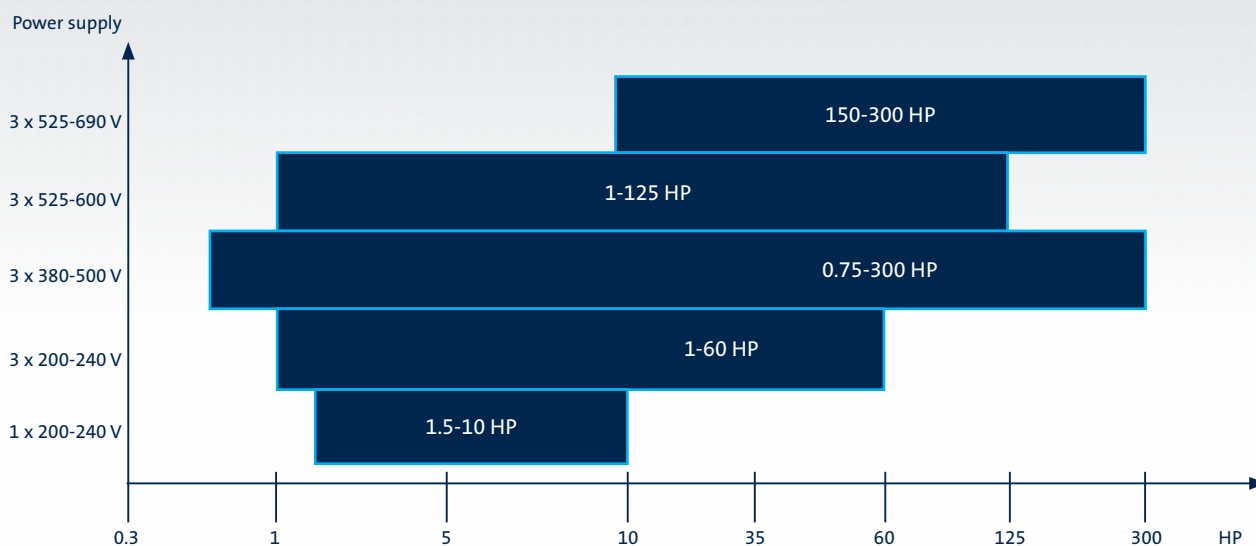
Variants

IP21/Nema 1 for cabinet installation

Nema 12 with power supply disconnect for wall installation.

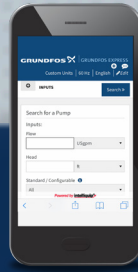
Search for **CUE** on Grundfos Express

Product range



EMC filter for conducted emission according to IEC61800-3 Ed. 2.

- CUE rated 500 V or lower up to 125 HP: Build-in filter for household application (class C1)
- CUE rated 500 V or lower above 150 HP: Build-in filter for industrial application (class C2)
- CUE rated 525 V or more independent of power size: Build-in filter for industrial application (class C3)



Grundfos Express

Select, configure and quote engineered pumps or systems in a few easy clicks through the Grundfos Express selection tool. Just enter your customers' equipment requirements and find details on matching products, including:

- Specs and performance data
- Submittal documents
- Pump schedules

Plus, you can save your inputs in the project portal for future use. grundfos.us/express

Global reach and local support

Grundfos is a truly global company and is never far away.

Our unique global set-up provides you with benefits, including:

- Technical assistance to size your pumping system
- Expert know-how and support in your local language
- Web-based tools
- Fast spare parts delivery on every continent

Contact your Grundfos sales representative for further information or help matching a Grundfos CUE variable frequency drive to your Grundfos pump and application.



WE ARE IN THE WATER BUSINESS WITH YOU

As a pioneer and global leader in water pump technology, Grundfos creates intelligent, sustainable solutions to help solve the world's water and climate challenges. Through our heritage, we have the experience and innovative capabilities to help our partners, customers and communities move water in an increasingly energy and water efficient manner. We see this as not only a great business opportunity, but as an obligation to ensure the world heads toward a more sustainable tomorrow. Our complete portfolio of pumps and solutions are designed for commercial, residential, groundwater, municipal and industrial applications with emphasis in trendsetting, energy efficient technologies such as permanent magnet motors and advanced pump controls and monitoring. Because water matters, and so does your business.

To learn more, visit grundfos.us or follow us on Facebook and LinkedIn.

Visit grundfos.us/pei to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.