



# A PERFECT MATCH



## INTELLIGENT PUMPS



# Intelligent pump technology for ultimate efficiency



*This major brewery is a good example of an industry which needs completely reliable water supply on demand. The CRE pumps ensure that water is always available to suit process requirements.*

### Matchmaking the Grundfos way

Some matches are made in heaven, and this is doubly true of the CRE range from Grundfos. The products themselves are a perfect combination of high-quality pumps and superior electronic speed control, and the wide range is sure to include the ideal match for your situation.

### A winning combination

Many pump applications involve varying flows and pressures, calling for solutions that adapt themselves perfectly to all situations and provide the results you want. The Grundfos CRE range is designed to do just that. And to do it with remarkable efficiency. The CRE pumps represent the happy union of the renowned CR pumps from Grundfos – the best multistage centrifugal pump range on the market today – and variable-speed motors developed by Grundfos with optimum electronic control in mind. The result is a range of pumps without equal.

### Developed by Grundfos

Few people would dream of driving by keeping the speeder to the floor and using the brakes to control their progress. Yet



this is exactly how many pump systems without electronic control work. Clearly, a lot of energy can be saved and a great deal of system wear prevented by using electronic speed control. Separate frequency converters and sensors have been used to adjust speed for quite some time, but Grundfos wanted to take things further.

Following extensive development work, Grundfos was able to integrate all electronics to create a single unit which incorporates everything you need for state-of-the-art electronic control. This handy and compact unit is so simple to use that it richly deserves the “plug-and-pump” designation. And complete reliability has been ensured in all stages of the development process.



### The essential benefits of the CRE

The ability to provide adjustable speed is the distinguishing mark of the CRE pump. This translates into a wide range of unique benefits.

- Perfect process control
- Substantial energy savings during operation
- Superior user comfort
- Remote control, monitoring, and data collection
- Reduced system wear
- Complete, fully integrated solution
- Easy installation and operation
- Full range of pumps for all applications

The benefits of the CRE pumps are described in more detail in the following pages.



## Efficiency and comfort

### Substantial energy savings

Variable speed brings constant benefits. CRE pumps adjust their speed to exactly suit current demands, meaning that energy is never wasted on generating pressure you do not require. The net result is energy savings of up to 50% – year in and year out.

### Complete comfort with constant pressure

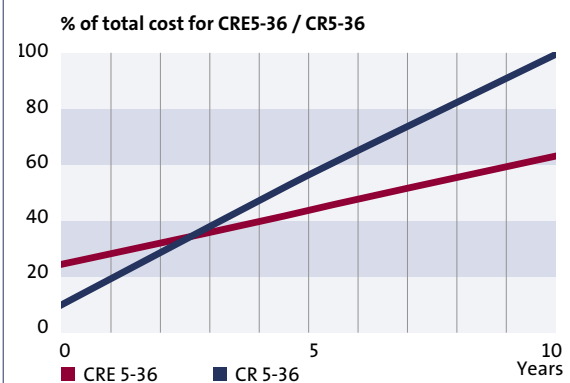
CRE pumps can maintain constant pressure in all water supply systems, even when faced with very challenging variations in flow and demand. This greatly contributes to everyday comfort; a fact which is much appreciated by end-users worldwide.

### Easy installation

The CRE range has been designed as “plug-and-pump” technology, making installation as easy as it can possibly be. All user interfaces and functions are identical across the entire range. The integrated unit design also makes it possible to eliminate system components that would be necessary in conventional solutions, thereby reducing investment costs.

*This curve demonstrates the typical impact of energy savings provided by the CRE pumps in water supply and boosting applications. Compared to a standard CR pump from Grundfos, the CRE pump begins to yield profits after just 2.3 years – and continues to do so ever after.*

% of total cost for CRE5-36 / CR5-36

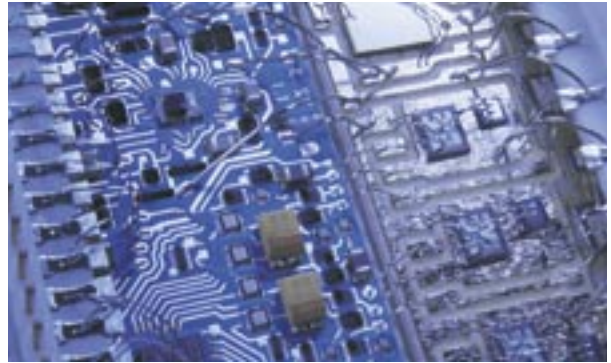


*Hotel guests all over the world benefit from the superior comfort provided by the CRE pumps. And hotel owners take pleasure in the fact that really satisfying showers are cheaper than ever with an E-solution from Grundfos.*

# Perfect precision

## Carefully controlled processes

Maintaining constant water pressure is just one of the many things that the CRE pumps can do with complete precision. Their adaptability enables them to deliver the exact flow and pressure required for almost any media and in almost any situation. Do you need constant differential pressure? Stable pH levels? Specific temperatures? Carefully timed operation? The CRE pumps can give you all of this and much more.



*Industries often demand exact flows and pressures with a wide range of media.  
Shown here in a food industry application, the CRE pump range can handle any process.*



## INTELLIGENT PUMPS



### Communication options

The CRE pumps can be remote-controlled and/or linked to management systems of your choice for perfect interaction. Their data collection ability offers unique opportunities for monitoring and directing operation performance and results. Remote control and monitoring can be carried out by means of the R100 remote control unit from Grundfos or via bus communication.

### Reduced system wear

Constant pressure will minimise mechanical stress in certain systems. In other systems, speed adjustment to maintain constant flow or temperature will improve the performance of system components. And of course the CRE pumps can provide all this to match your specifications.

### Full range to accommodate all needs

The CR range of centrifugal pumps stands for unmatched reliability and the widest choice on the market. And the frequency converter control motors designed by Grundfos add the extra edge that makes the CRE pumps so special. The entire CR range of centrifugal pumps can be fitted with a variable-speed motor, meaning that you can enjoy the special CRE benefits regardless of your other requirements. Please consult our materials on the CR range for further details.



## CRE – a perfect match

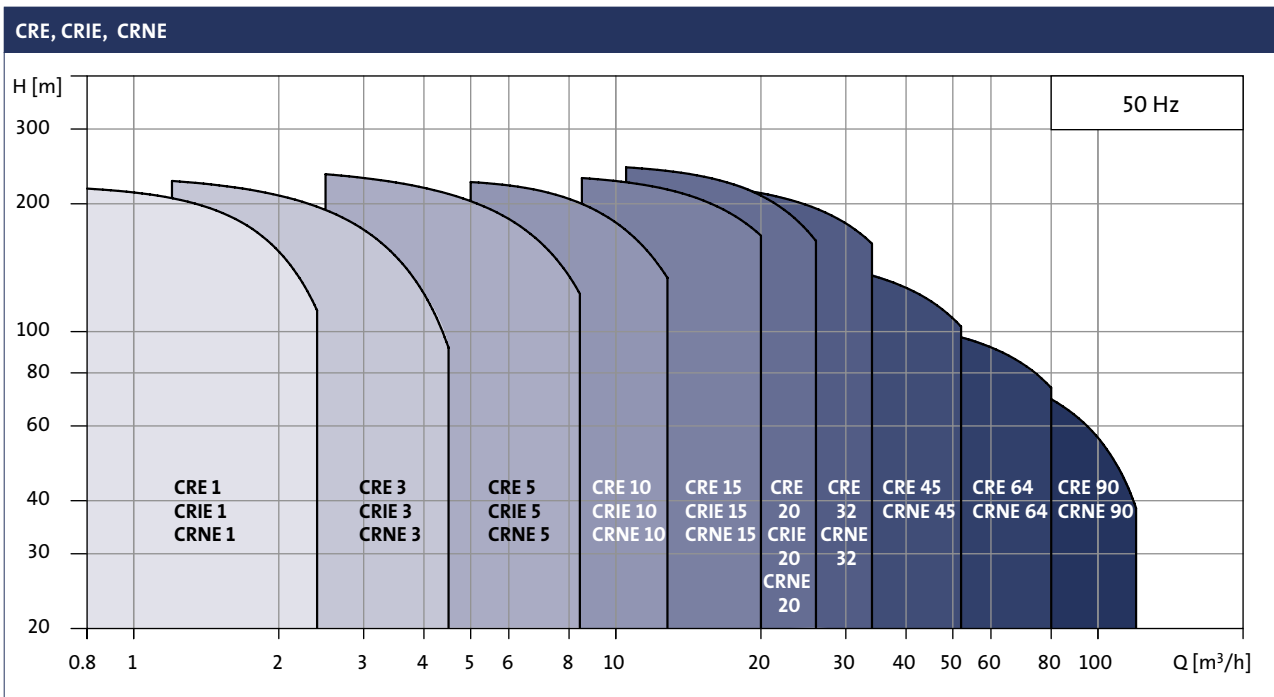
In short, the combination of Grundfos motor technology and pump expertise guarantees ultimate efficiency and precision performance. The CRE pump is a textbook example of the whole being even greater than the sum of its parts. It is, quite simply, a perfect match.

	CRE 1	CRE 3	CRE 5	CRE 10	CRE 15	CRE 20	CRE 32	CRE 45	CRE 64	CRE 90
<b>Range</b>										
Nominal flow rate [m³/h]	1	3	5	10	15	20	32	45	64	90
Temperature range [°C]	-20 to +120						-30 to +120			
Temperature range [°C] – on request	-40 to +180						-40 to +180			
Max. pump efficiency [%]	48	58	66	70	72	73	78	79	80	81

<b>CRE pumps</b>										
Flow range [m³/h]	0.7 - 2.4	1.2 - 4.5	2.5 - 8.5	5 - 13	9 - 24	11 - 29	15 - 40	22 - 58	30 - 85	45 - 120
Max. pressure [bar]	22	24	24	22	23	25	24	16	12	10
Motor power [kW]	0.37 - 2.2	0.37 - 3	0.37 - 5.5	0.37 - 7.5	1.1 - 15	1.1 - 18.5	1.5 - 22	3 - 22	4 - 22	5.5 - 22

<b>Version</b>										
CRE Cast iron and stainless steel AISI 304	•	•	•	•	•	•	•	•	•	•
CRIE Stainless steel AISI 304	•	•	•	•	•	•	-	-	-	-
CRNE Stainless steel AISI 316	•	•	•	•	•	•	•	•	•	•
CRTE Titanium	•*	•*	•*	•*	•*	-	-	-	-	-

\*CRTE 2, 4, 8 and 16.



### The CR range from Grundfos

Grundfos was the first company ever to develop a multi-stage in-line pump. The present-day CR pump series remains second to none. It is the most extensive in-line pump programme on the market, matching all customer requirements. With many innovative features unique to Grundfos, CR pumps provide superior reliability and the lowest possible cost of ownership to customers worldwide.

### Grundfos: a pump for every purpose

Impressive as the CR range is, Grundfos offers much more. A complete range of pump solutions means that all applications – industrial and domestic – can benefit from the Grundfos touch.

Customers can always rely on our complete dedication to quality and service.