

# FOOD PROCESSING

## PUMPS FOR INDUSTRY



**YOUR ANSWER TO WATER AND EFFICIENCY CHALLENGES**

be  
think  
innovate

**GRUNDFOS** 

# COMPLETE, EFFICIENT SOLUTIONS

## TO MEET PROCESSING PLANT DEMANDS



At Grundfos, we understand the demanding environment of food processing plants.

Managing a plant means optimizing processes, maximizing uptime, managing resources, and ensuring the safety of workers and products to meet government regulations. In Grundfos, you gain more than a pump supplier, you gain a partner focused on solving the challenges of your operation and delivering higher efficiency and reliability than you thought possible.

Dedicated to innovation and a trendsetter in water technology, Grundfos continuously advances our products and capabilities to meet the increasing need for connectivity, accuracy and efficiency in our ever-evolving industry.



# PRESSURE BOOSTING

## The World's Leader

The Grundfos CR is the world's number one inline vertical multistage centrifugal pump, known for its reliability, efficiency and adaptability. The CR pump range is the broadest range available and through our modular approach, you are able to pick and choose pump elements to cover practically any non-standard situation, including handling difficult or high-temperature liquids. By integrating a variable-speed MLE motor and sensor, the Grundfos **CRE\*** becomes a fully integrated, intelligent plug and pump solution that can adapt to changes in the entire process system.

\*Available voltages: (1ph 115-230, 3ph 208, 230 & 460v)

**HIGH-EFFICIENCY CRE DESIGN CUTS ENERGY CONSUMPTION BY UP TO 50 PERCENT COMPARED TO FIXED SPEED PUMPS.**

## Moving the Limits – The New Range of Grundfos CRs

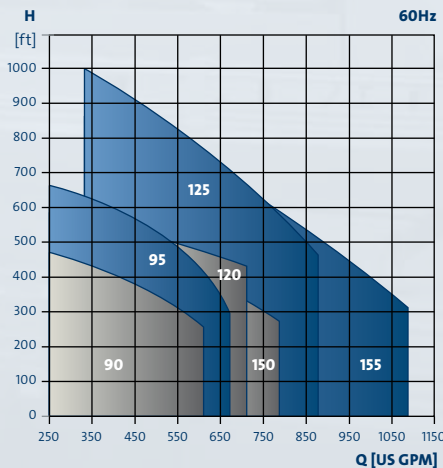
More efficient, reliable and durable than ever before, the new range of the Grundfos CRs move the limits for vertical inline multistage centrifugal pumps. State-of-the-art technology, simulation-driven design, and optimized pump hydraulics come together to offer unmatched efficiency and reliability. The new CR 95-155 vastly increases the performance coverage of the previous range, offering more than 1,000 gpm and 580 psi.

## Multi-pump Solutions

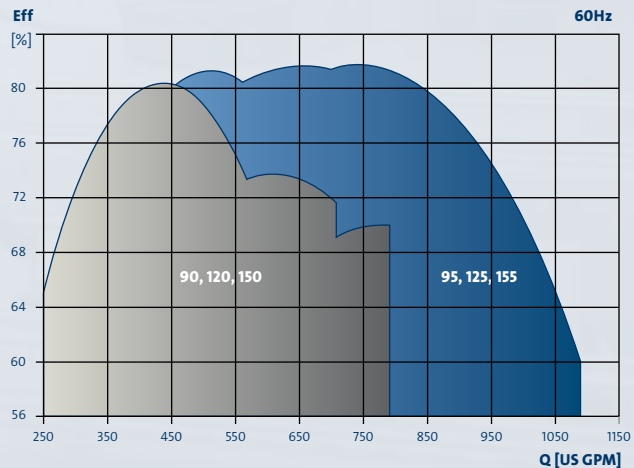
The CR range forms the backbone of the Grundfos plug-and-play Hydro MPC booster systems. These performance-optimized systems are available in configurations with up to six CR pumps, allowing for flows of up to 5,400 gpm.



## Expanded Performance



## Increased Efficiency



■ Previous models 90/120/150    ■ New models 95/125/155

# DOSING AND DISINFECTION

The Grundfos dosing and disinfection product range covers everything from disinfection of drinking water to antimicrobial washes. With one of the most extensive product ranges of pumps, packages and accessories in the market, Grundfos dosing and disinfection products deliver accuracy, reliability and safety in an area where processing plants can't afford errors.

## SMART Digital Dosing™

Traditional dosing pumps regulate the dosed quantity by adjusting stroke length and/or frequency. However, reducing the stroke length adversely affects dosing accuracy. In cases where the dosing pump cannot operate at 100 percent stroke length, valves will suffer from reduced performance, leading to inefficient dosing. Digital Dosing™ offers a clear advantage – by using a stepper motor, the volume dosed is altered by the discharge stroke speed while continuously utilizing 100 percent of the stroke length. This results in optimum dosing accuracy and better handling of off-gassing liquids.

## DDA

The top-of-the-line DDA pump is designed as the perfect solution for complex and demanding applications. Its auto-deaeration feature easily handles off-gassing liquids. The control variants offer a range of intelligent options, including selective fault diagnosis, built-in pressure monitoring, integrated flow measurement, and AutoFlowAdapt, which allows for the setpoint to remain constant even when discharge conditions, such as pressure, change. This ensures the desired amount of chemical is consistently added to the process.

The DDA range offers performance up to 52.8 gph (200 l/h) and is the ideal solution to deliver high flows accurately.



## DDE\*

The DDE\* pump offers the same drive strategy as a DDA, but at a cost-effective solution with basic functions for simple applications. Setting the dosing capacity from 0.1% to 100% is easy. A logarithmic scale adjustment dial enables precise low flow settings up to 52.8 gph (200 l/h).

\*Available voltages: (1ph 115-230, 3ph 208, 230 & 460v)



### DDA INFORMATION

Maximum flow, Q:	52.8 gph (200 l/h)
Maximum pressure, P:	232 psi (16 bar)
Turn-down ratio:	3,000:1

### DDE INFORMATION

Maximum flow, Q:	52.8 gph (200 l/h)
Maximum pressure, P:	145 psi (10 bar)
Turn-down ratio:	1,000:1

# DOSING SKID SYSTEMS

## Complete dosing skids tailored to your application

Grundfos' complete chemical feed systems make dosing technology available as a plug and play package, with all necessary pipework, valves and dosing pumps. We can deliver standardized packaged systems or build custom solutions to meet your unique specifications. In our custom systems, you can select dimensions, connection locations and installation options, choice of materials, and accessories, including electrical controls, containment systems and optional measurement and control instruments.

**8,000 HOURS OF  
OPERATION BEFORE WEAR  
PARTS NEED SERVICE  
BECAUSE UPTIME AND  
DURABILITY MATTER.**

## APPLICATIONS

- Peracetic acid
- Sodium hypochlorite
- Sodium bisulfate
- Alum
- Potassium permanganate
- Sodium hydroxide
- Acids
- Anti-scalants

### DSS INFORMATION

**Maximum flow, Q:** 556 gph (2105 l/h)

**Maximum pressure, P:** 2900 psi (200 bar)

**Turn-down ratio:** 3,000:1



# WASHING AND CLEANING

CIP (Cleaning In Place) and SIP (Sterilization In Place) systems are ideal in industries where hygiene is of the utmost importance and contamination must be avoided at all costs. Grundfos precise dosing pumps add only the necessary disinfectant, detergent or chemical potentially reducing the flushing of the CIP system and forming the backbone of the Grundfos offerings for this area.

## CIP and SIP Processes

Grundfos CIP pumps can handle high temperatures and are made of stainless steel, so they can withstand the aggressive chemicals, disinfectants and detergents encountered in cleaning processes. Because the CIP system is never in contact with the actual process, sanitary pumps are not required. Additionally, CIP pumps are electro-polished to make sure no residue sticks to the inside. Without dismantling any equipment, tanks, pipes or process lines can be efficiently cleaned, saving time and money.

For the more demanding SIP process, the Grundfos range multistage pumps are used to feed the boiler producing the steam that efficiently cleans at very high temperatures.

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## Wash Down Systems

Choosing a Grundfos pump in your wash-down system guarantees outstanding performance.

In stationary solutions, multistage centrifugal pumps, such as the Grundfos CR and CM, ensure the pressure is high at all times, while mobile wash-down systems offer spot-cleaning that is as high-performing as it is energy-efficient. Fitted with a frequency converter, the compact pump easily operates at various pressures, dispersing the disinfectant or chemicals at low pressure, washing down at high pressure and spot-cleaning at even higher pressure.

Both stationary and mobile solutions can be customized to meet your pressure and size requirements.



## CM/CME\*

Innovation is at the heart of all Grundfos product solutions and the CM is no exception. This horizontal inline multistage pump is a compact, reliable, efficient pumping solution. By integrating a variable-speed MLE motor and sensor, the Grundfos **CME\*** becomes a fully integrated, intelligent plug and pump solution that can adapt to changes in the entire process system.

From end to end, Grundfos' proven quality and attention to detail is the difference between the CM/**CME\*** and the competition. Grundfos has created a robust design to ensure secure clamping of the pump impellers by using the Nordlock® washer. Additionally, the Grundfos engineered shaft seal has been designed to eliminate industry-wide problems with shaft seals sticking where SIC-SIC seal faces are used.

The Grundfos CM/**CME\*** is designed to be used in a variety of applications, including:

- Washing and cleaning
- Temperature control
- Water treatment

**\*Available voltages:** (1ph 115-230, 3ph 208, 230 & 460v)

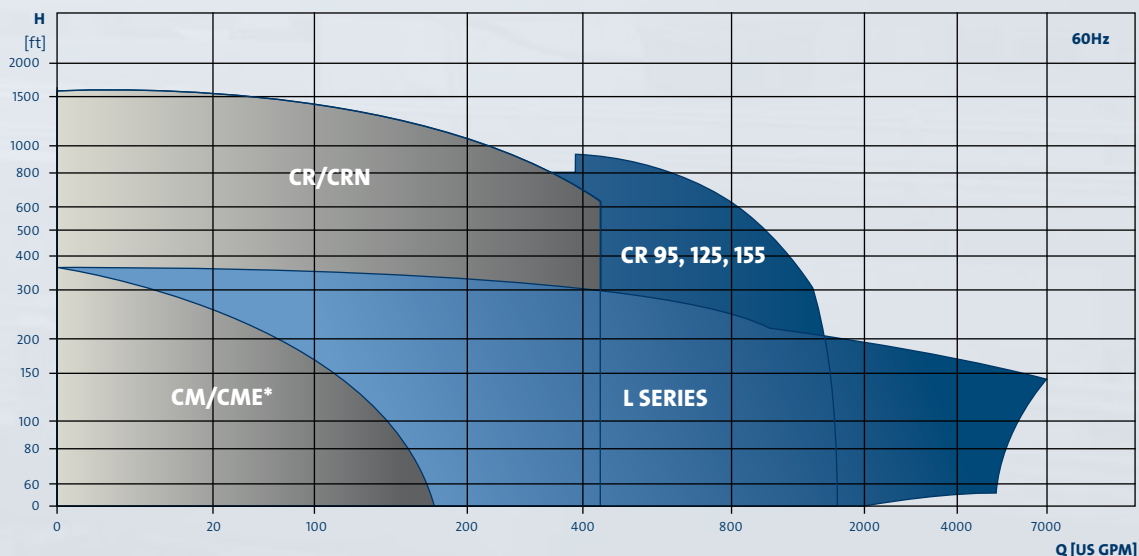


## LC/LF/LCSE\*

The Grundfos line of close coupled and frame-mounted end suction pumps serve as the industry standard in performance, quality and durability. They feature low life-cycle costs and a selection of 32 sizes to meet your precise application needs. Additionally, the innovative pump and impeller design produces an increase of up to 91 percent in operating efficiency and provides a wider band of best operating efficiency, even during conditions of off-design operation.



## A Complete Range of Pumping Solutions



**\*Available voltages:** (1ph 115-230, 3ph 208, 230 & 460v)

## GRUNDFOS INDUSTRIAL SOLUTIONS

Grundfos has developed and produced high-quality industrial pumps for more than half a century. Throughout our long history, our focus has always been on product performance and reliability. We strive to provide our customers with the best possible solution, regardless of the application. This dedication to customer needs makes us a preferred pump partner for industries all over the world.