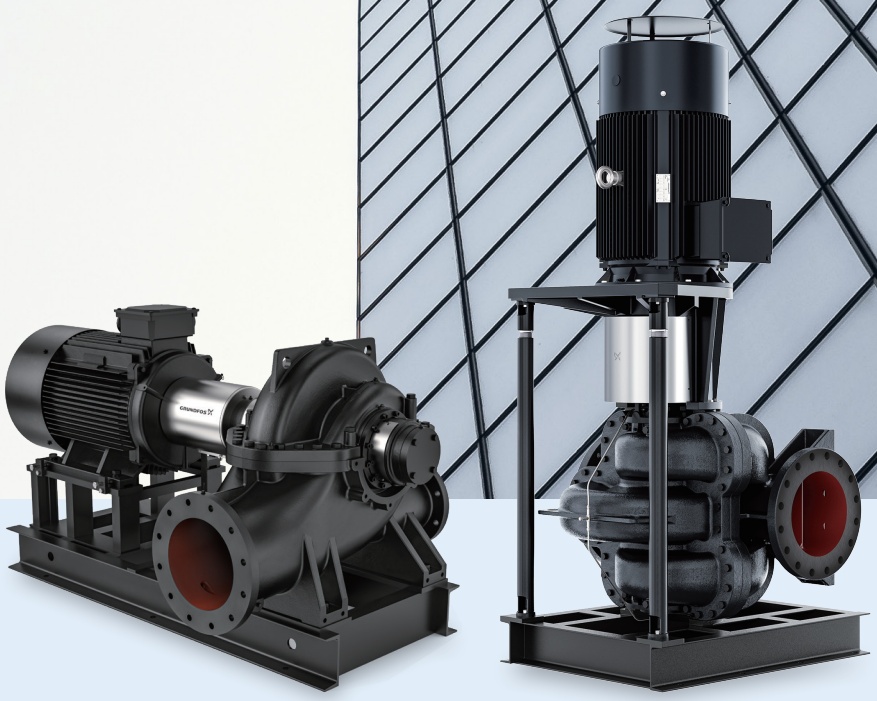
High-efficiency water solutions for a smarter, net-zero future



LS/LSV Split case pumps

GRUNDFOS

Possibility in every drop

Discover more at
grundfos.com

High-efficiency split case pumps

Grundfos LS long-coupled, horizontal split case, double suction pumps, are single-stage, non-self-priming, centrifugal volute pumps.

The LS/LSV pumps are designed for a wide variety of segments applications and manufactured according to the highest Grundfos quality standards. These high-efficiency pumps have a wide efficiency range and very low NPSHr, which ensures safe and economic operation even when the actual flow deviates from the designed duty point.

Applications

Building system

- Air conditioning
- Heating systems
- Chilled water system
- Water condensing system
- Cooling towers
- District energy



Water supply

- Water intake
- Water boosting
- Water transportation
- Backwashing
- Irrigation



Industry

- Industrial process system
- Industrial heating
- Boiler feed system
- Industrial condensing system
- Seawater desalination





High efficiency

LS/LSV pumps have a very high efficiency, not only at the rated flow but also within a wide flow range. The pump retains high efficiency even when the actual flow deviates by +/-20% of rated flow. The feature enables the system to operate at high efficiency when pumps have to operate in parallel, which fits precisely the specific application at the different segments, variable duty points and wide demands for flow range.

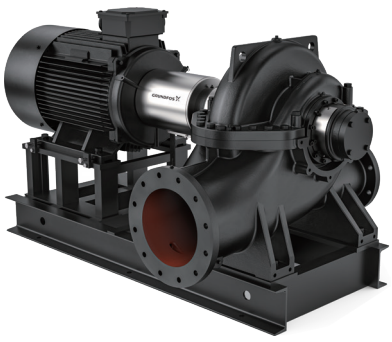


Reduced service cost

The independent bearing housing design makes maintenance possible without interfering with the pump casing.

Highly reliable

LS/LSV pumps have an in-line design with a radial suction port and radial discharge port. The flanges are in accordance with DIN standards and pump performance is in accordance with ISO9906. The compensated double-volute design virtually eliminates radial forces on the shaft and ensures smooth performance throughout the entire operating range.



Perfect for future intelligence

LS/LSV pumps have excellent compatibility with GIS systems. Additionally, they can be seamlessly integrated with the Grundfos CUE or an external VFD to operate with high efficiency across various frequencies and duty points.

What makes the LS pump so good

The details

Wear ring

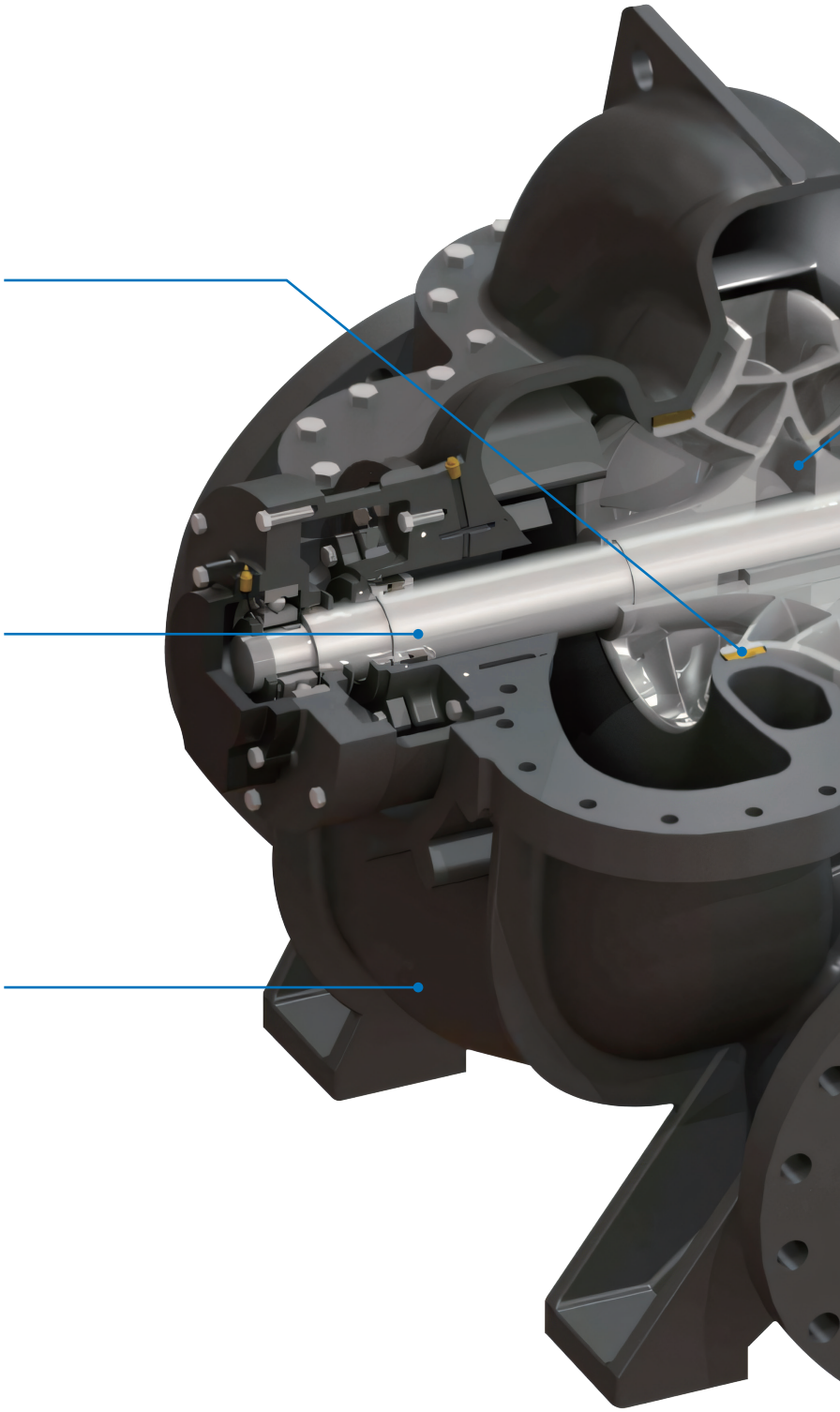
Replaceable wear ring design helps to solve the efficiency drop problem after long-term operation. The wear ring can be made from different materials according to customer requirements and the application.

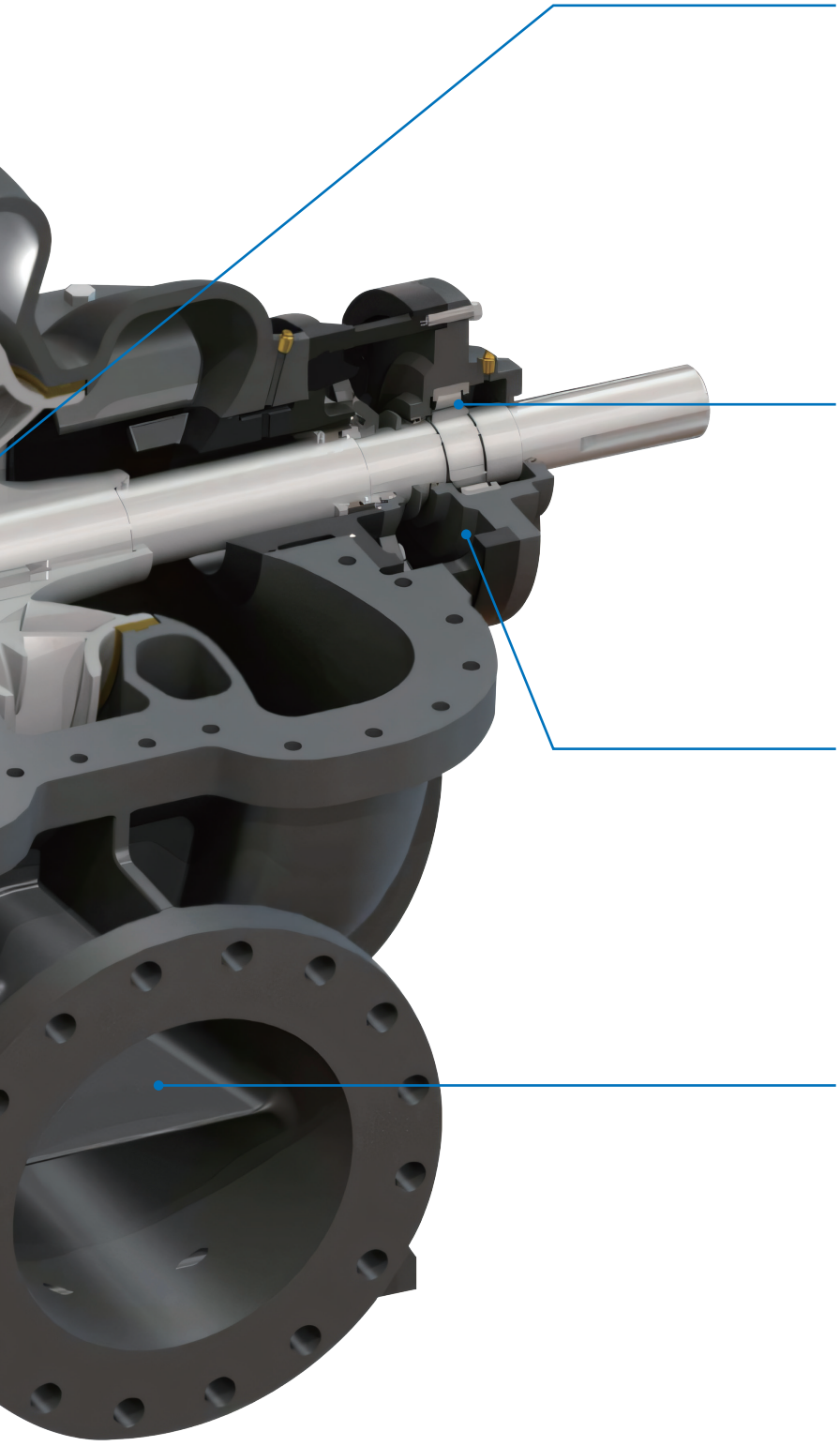
Shaft

The strength and stiffness of the shaft are meticulously calculated to withstand stress under the harshest operating conditions.

Pump casing

Hydraulic double volute design reduces radial loads, internal recirculation and turbulence, resulting in a longer pump life span and a higher operational efficiency. The split casing enables maintenance of rotating parts without disturbing the pipe lines.





Impeller

Francis vane impeller design balances the axial force and radial force, decreases the vortex and recirculation in the volute, widening the high efficiency range, and also meets the low NPSH requirement at high flow. All this ensures reliable operation under the entire performance range, matching different application demands.

Bearing

Heavy duty bearing design is for the most severe environments, with average rated life span 100,000 hours within 80% to 120% of BEP.

Bearing housing

The bearing sleeve design makes maintenance easier. The independent bearing housing design makes maintenance possible without interfering with the pump casing, and the bearing sleeve design makes service even easier.

Compensated double volute design

The compensated double volute design virtually eliminates radial forces on the shaft and ensures smooth performance throughout the entire operating range.

Solution tools for optimised application

Grundfos uses a range of solution tools that resolve issues already at the design stage, and increase pump performance and system efficiency when in operation to optimise your application.

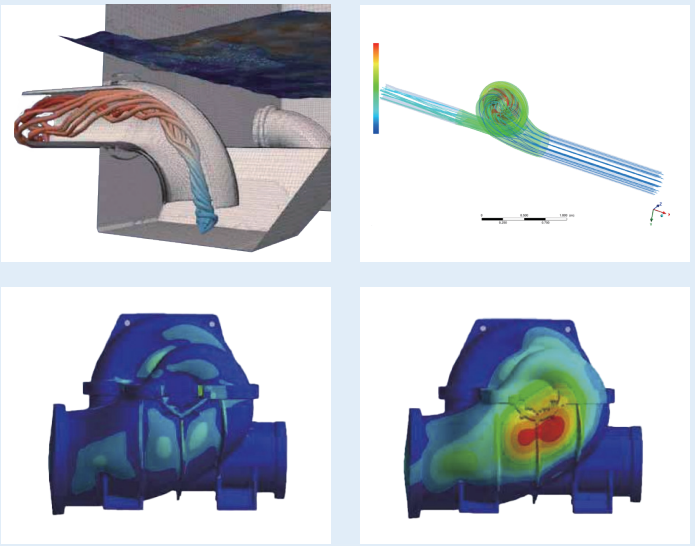
Computational fluid dynamics

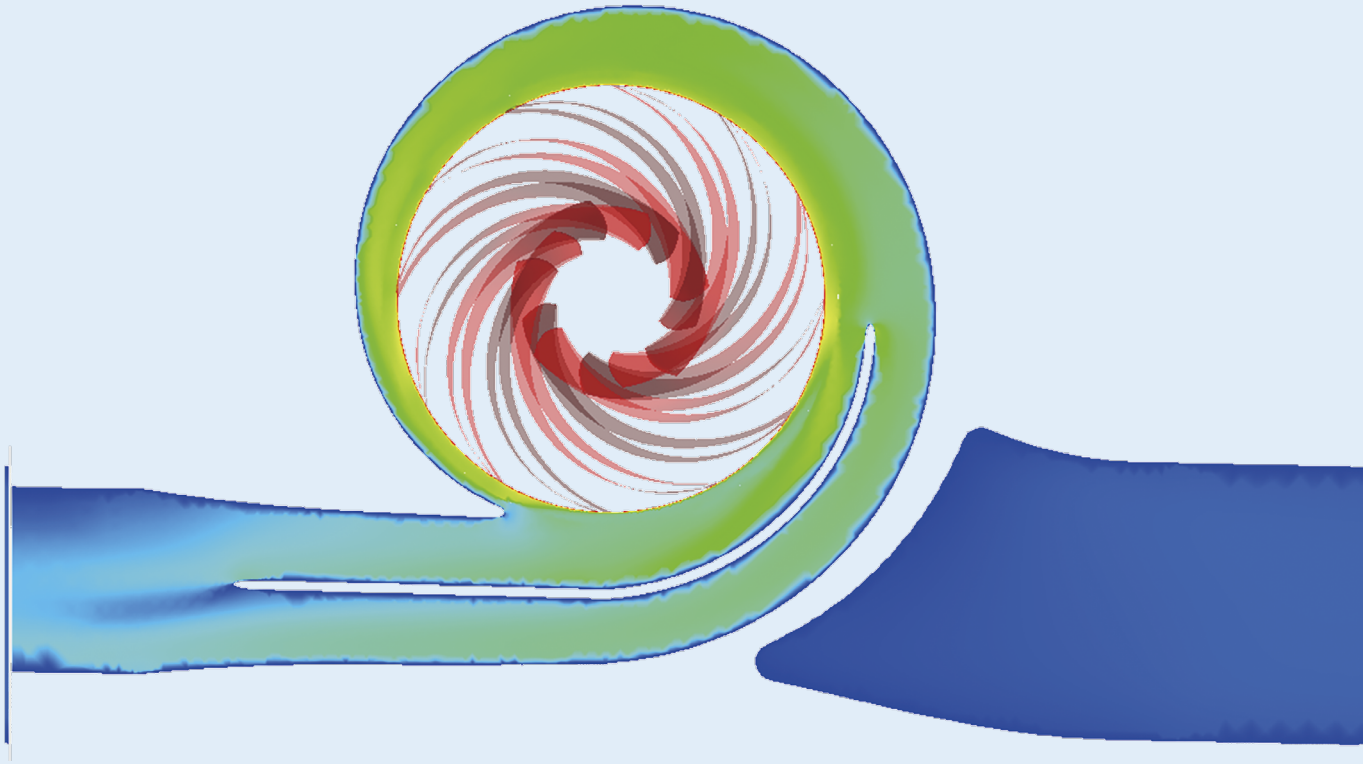
The LS pump's hydraulic components are designed using advanced Computational Fluid Dynamics (CFD) simulations and the expertise built up by Grundfos over many years.

At Grundfos, we use CFD simulations to minimise the risks and cost and time overruns with the design.

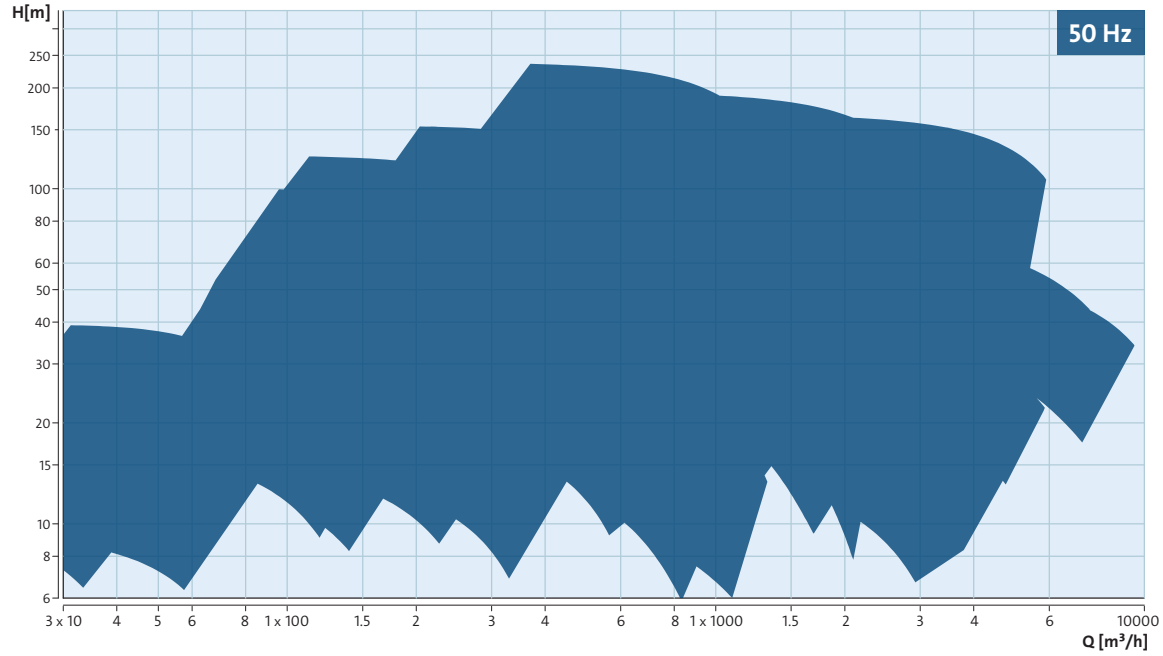
This is done by:

1. Improving the flow system design
2. Identifying critical flow issues and the cause of existing problems
3. Reducing the cost compared to the investment for physical modelling

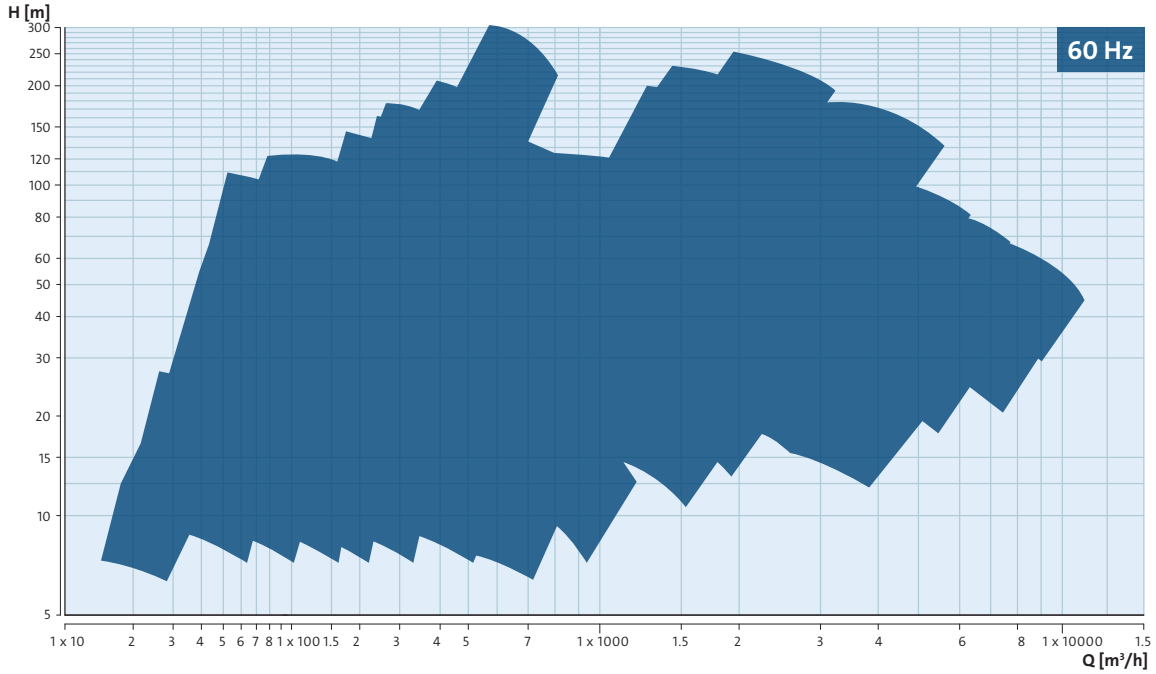




50Hz version performance map



60Hz version performance map



Performance	
Motor power	1.1-2,800 kW
Flow, Q	up to 10,000 m³/h
Head, H	8-165 m
Liquid temperature	0-100°C
Suction port	DN65-DN1000
Discharge port	DN50-DN700
Operation pressure	10 bar-25 bar
Max. hydraulic efficiency	91.5%

	Standard configuration	Optional configuration
Pump casing	Cast iron/Ductile iron	Cast steel/Stainless steel
Impeller	Stainless steel	Bronze/Duplex stainless steel
Shaft	Stainless steel	Duplex stainless steel
Wear ring	Bronze/Brass	Cast Iron/Stainless steel
Shaft seal	Mechanical seal	Stuffing box
Low voltage motor	IE4, IE3	IE5

For other speed performance curves, refer to the Grundfos data booklet

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Grundfos is committed to pioneering a more sustainable world through energy optimisation and efficiency.
When you replace existing solutions with highly efficient, energy-optimised systems, you'll not only enjoy the energy and cost savings that come with greener buildings, but also the improved reliability and increased indoor comfort.

Pave the way for a greener future. Scan the QR code to find out how energy optimisation means the world to us:

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