

GRUNDFOS SE & SL RANGES

SUBMERSIBLE AND DRY-INSTALLED WASTEWATER PUMPS

0.9 - 30 kW 2, 4, 6 POLE



THE SE & SL RANGES

DEPENDABLE WASTEWATER HANDLING

BE > THINK > INNOVATE >

GRUNDFOS 

RENEWED AND EXPANDED, THE HIGHEST TOTAL EFFICIENCY PUMPS YET

The renewed and expanded ranges of Grundfos SE and SL wastewater pumps continue the tried and trusted SE and SL story, providing technologically advanced pumps for wastewater handling.

Designed for demanding situations, the Grundfos SE and SL pumps are available with the innovative technologies and functionality that Grundfos brings to pumps and pump systems, ensuring optimised performance and pumps with the highest wire-to-water efficiency yet.

New hydraulics

The very nature of wastewater is challenging, with dry solids content varying over time. Similarly, water use has not remained static either. However, the demands on the wastewater pump remain the same: In addition to being as efficient as possible, it must also pump media containing large solids, rags and fibres without clogging the pump.

The SE and SL ranges are available with the **S-tube** impeller – the only impeller on the market designed to take on these challenges. The simple and robust design of the **S-tube** impeller meets the requirements of today's wastewater with varying solids content, offering world class hydraulic efficiency without compromising free passage.

DEPENDABLE PUMPS AT WORK

The SE and SL wastewater pumps are designed for the transfer of drainage and surface water, domestic, municipal and industrial wastewater, and process water. They can be permanently installed using an auto-coupling guide-rail system or with a fixed pipe connection, and are also for freestanding installation or as portable utility pumps.

Designed for the transfer of wastewater in:

- network pumping stations
- wastewater treatment plants
- public buildings
- industry.

The SE and SL wastewater pumps can handle:

- drainage and surface water
- municipal wastewater
- wastewater with fibres
- industrial wastewater
- process and cooling water.



TECHNOLOGIES FOR THE SE & SL RANGES, BY GRUNDFOS

At Grundfos, our commitment is to introduce breakthrough technologies for the wastewater market, raising the bar and setting new standards for wastewater pump systems and solutions.

Optimum wire-to-water efficiency is ensured by the technologies that we put into our pumps and pump systems.

The highest motor efficiency, the adaptive intelligence that can be built in, the design and functionality and the **S-tube** impeller ensure the best total efficiency, the lowest life cycle costs and trouble-free operation for your wastewater pump systems and solutions.



Grundfos Blueflux® guarantees the highest motor efficiency from Grundfos. The Grundfos Blueflux® label guarantees that the motor technology used is ahead of current market standards, and either meets or exceeds global legislative requirements for motor efficiency, where these apply.



AUTOADAPT describes the intelligent controls that allow a Grundfos pump system or solution to autonomously adapt its operation to dynamic operating conditions in the application. This results in a substantial reduction in service calls, savings on energy consumption and on installation and commissioning costs. **AUTOADAPT** opens up for the benefits of remote surveillance and management, making life easier while saving time and money.



What we call **smartdesign** describes the functional design of our products that combines elegant appearance with smart features, created with customer needs in mind. **smartdesign** doesn't only look good; the design also makes installation, operation and maintenance of the product easier and more user-friendly.



The **S-tube** impeller is the only impeller available in the wastewater market that does not compromise either hydraulic efficiency or free passage through the pump. Offering simplicity in design and operation, we expect the **S-tube** impeller will be the impeller of choice for wastewater applications in the future.



WHAT THESE PUMPS CAN DO FOR YOU

Shared between the SE and SL wastewater pumps are a range of features offering functionality that meets your needs. Installation, operation and maintenance of your SE or SL pump are made easy and user-friendly. Also available in stainless steel versions, the SE and SL ranges of pumps can be tailored to your requirements.

● IE3 motor efficiency

The highest standards of motor efficiency ensure substantial energy and cost savings with a standard Grundfos IE3 norm motor modified with fan, modified bearings, changed motor housing to support submersible use, and shaft seal.

● Intelligent adaptive controls

AUTOADAPT builds intelligent monitoring and controls into the pump system, ensuring tangible benefits during the operational cycle. Installation and commissioning costs are reduced substantially, pump reliability is increased, and operation is with low energy consumption.

● Integrated analogue sensors

In addition to the standard thermal sensor in motor windings, many analogue sensor versions and a digital moisture switch offer complete monitoring of pump condition, offering you the advantage of continual surveillance, warnings and alarms.

● Lifting handle

The lifting handle is designed for optimum point-of-balance, ensures correct lifting and will protect the auto-coupling sealing.

● Smooth, easy to clean surface

The extremely robust impact-resistant stainless steel sleeve provides an easy-to-clean smooth surface.

● One cable to the pump

With just one cable containing sensors and power supply, an important at-risk area is removed, simplifying pump installation, commissioning and maintenance.

● Moisture proof connector

The innovative and patented stainless steel cable connection ensures that liquid cannot penetrate through the cable inlet into the motor.

● Patented SmartSeal

The patented Grundfos SmartSeal Auto-coupling gasket provides a completely leak-proof connection between the pump and the base unit of the auto-coupling system.

● Easy to open clamp

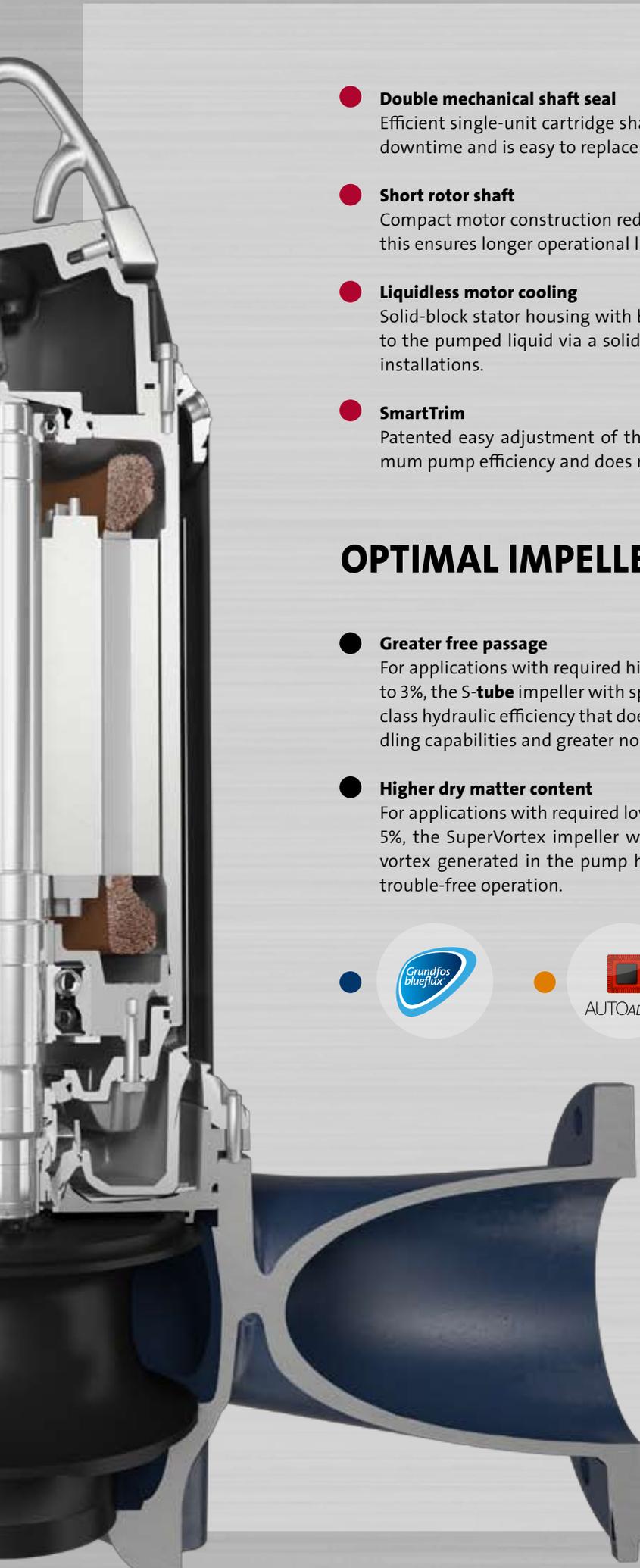
The stainless steel clamp assembly system requires no tools for the quick and easy disassembly of pump from motor unit, offers easy access for pump maintenance. The bolts used on larger pumps are easy to remove and do not require special tools.



- **Double mechanical shaft seal**
Efficient single-unit cartridge shaft seal system ensures longer operation time with less downtime and is easy to replace in the field, without the need for special tools.
- **Short rotor shaft**
Compact motor construction reduces vibrations to protect shaft seals and bearings, and this ensures longer operational lifetime with less maintenance.
- **Liquidless motor cooling**
Solid-block stator housing with built-in cooling conduits efficiently transfer excess heat to the pumped liquid via a solid cast iron flange, for continuous operation, even in dry installations.
- **SmartTrim**
Patented easy adjustment of the factory-set impeller clearance helps maintain maximum pump efficiency and does not require special tools or dismantling the pump.

OPTIMAL IMPELLER CHOICE:

- **Greater free passage**
For applications with required high operating hours and where dry matter content is up to 3%, the **S-tube** impeller with spherical free passage up to 160 mm is perfect. The world class hydraulic efficiency that doesn't compromise free passage means better solids handling capabilities and greater non-clogging capabilities.
- **Higher dry matter content**
For applications with required low operating hours and where dry matter content is over 5%, the SuperVortex impeller with spherical free passage up to 100 mm is ideal. The vortex generated in the pump housing keeps fibres or gassy sludge moving, ensuring trouble-free operation.



NO COMPROMISE

The SE and SL ranges of submersible and dry-installed wastewater pumps are available in the following versions:

SE1/SEV 1.1 - 30 kW 2, 4, 6 pole
SL1/SLV 0.9 - 30 kW 2, 4, 6 pole

These heavy duty wastewater pumps offer the best total, wire-to-water efficiency yet seen with IE3 motor efficiency and new hydraulics, including the **S-tube** impeller, which offers outstanding hydraulic efficiency and excellent non-clogging capabilities, without compromising free passage.

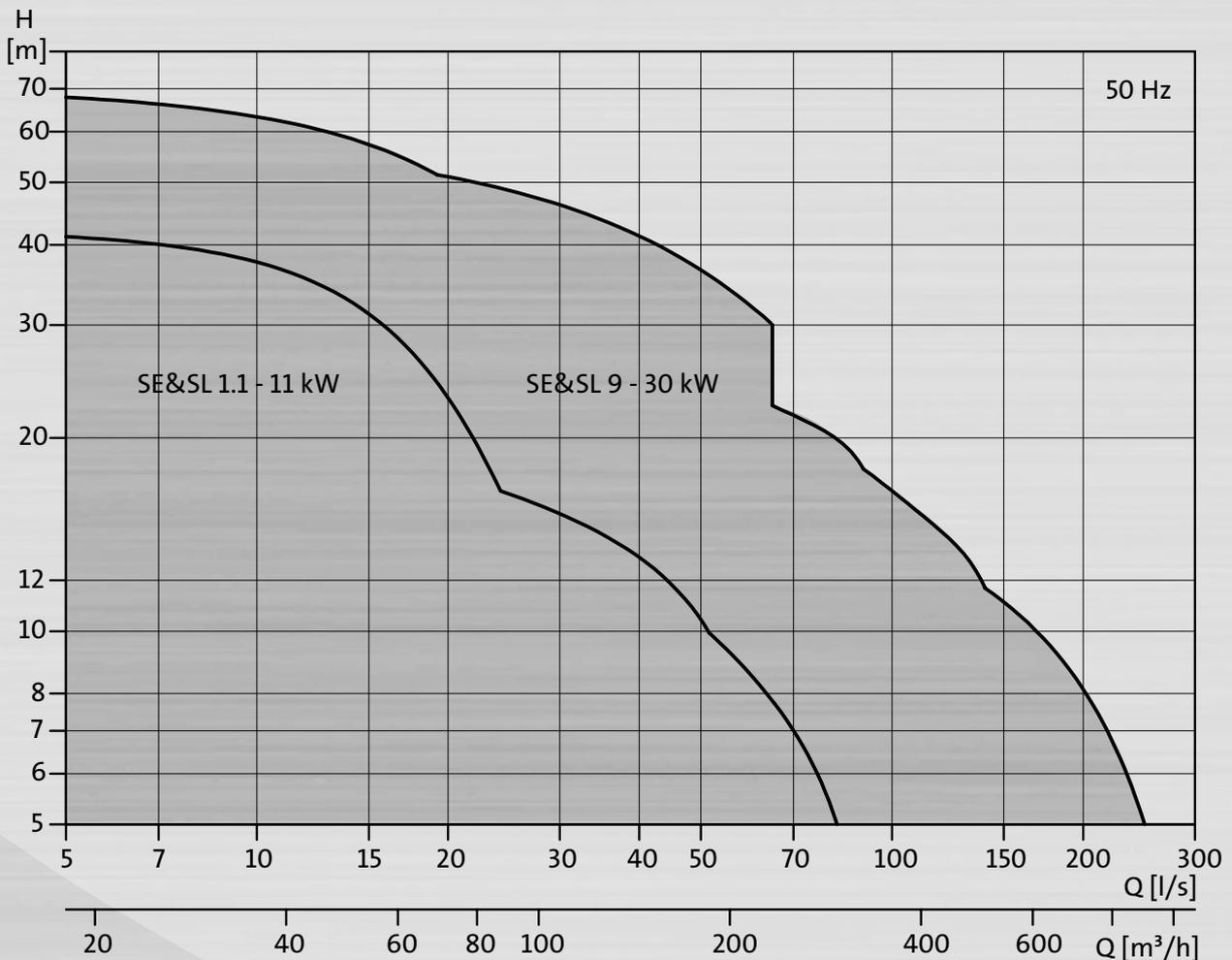
The **S-tube** impeller developed by Grundfos includes a tube-shaped channel impeller and a pump housing around it that matches the tube shape through the entire pump.

In particular, we have succeeded in reducing vibration and resolving sealing issues. Vibration is reduced by means of a unique method for statically and dynamically balancing the impeller, and a unique and patented sealing system designed to ensure the highest reliability over time.

These pumps come with a replaceable wear ring or SmartTrim system. Both systems ensure optimum impeller clearance and will return the pump to full efficiency when applied.

The SE and SL wastewater pumps are designed for the transfer of drainage and surface water, domestic, municipal and industrial wastewater, and process water. They can be permanently installed using an auto-coupling guide-rail system or with a fixed pipe connection, and are also for freestanding installation or as portable utility pumps.

PERFORMANCE CURVES



SUBMERSIBLE PUMPS THAT WORK WITH YOUR SYSTEM

The SL1/SLV range 0.9-30 kW, 2, 4 or 6 pole

The SL range is created to optimise performance in your system; minimising known risk factors and reducing maintenance requirements. Remarkably durable, the SL range offers long lasting, service friendly submersible wastewater pumping.

The highest standards of motor efficiency ensure substantial energy and cost savings. Motors are based on IE3 components, improving motor efficiency and prolonging pump life. SL pumps are available in variants with a stainless steel impeller.

HEAVY DUTY OPERATION, SUBMERGED OR DRY- INSTALLED

The SE1/SEV range 1.1-30 kW, 2, 4 or 6 pole

The SE range of pumps is built for years of trouble-free operation. The SE range can operate submerged or dry-installed without motor cooling, and is extremely reliable and very easy to service.

A number of material variants are available for SE pumps, from variants with a stainless steel impeller to stainless steel variants for aggressive environments, meeting the standards EN 1.4408 and EN 1.4517/1.4539.



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Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence



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