

Pioneering for You

**wilo**

*Application brochure*

## **Wilo systems for water transport.**

Solutions for water distribution and pressure boosting.



## Wilo – Pioneering for You.



### **We are there for you worldwide.**


Since 1872, we at Wilo have been turning visionary ideas into intelligent solutions that regularly set new standards in the industry. The goal of our company founder, Caspar Ludwig Opländer, was to use his *Kupfer- und Messingwarenfabrik* to improve and facilitate the supply of water to people. It was not long until the decisive step was made: In 1928, his son Wilhelm designed the world's first circulation accelerator.

We have continued this tradition ever since with pioneering innovations, such as the world's first high-efficiency pump in the heating, air-conditioning and cooling sector, and at the same time we have proven our commitment to using valuable resources such as energy and water responsibly. Today, with its headquarters in Dortmund, the Wilo Group is a complete system supplier of pumps and pumping systems for water management with worldwide presence.

**Cooperative support on which you can rely on.**

With over 7,500 employees and 60 production and sales companies all over the world, we personally see to it that the desires and requirements of our customers and users – whether specialist consultants, operators, or general contractors – are optimally met every day. This means making your life and work as easy as possible with the help of our products, solutions and services.

“Pioneering for You” is our commitment to a clear customer focus, strict quality orientation and strong passion for technology. In times of dwindling natural resources, the responsible management of water is an extremely important task, which is why we are committed to providing pioneering developments, sustainable product solutions, and cooperative support to ensure you can rely on our solutions for the daily management of water. That’s what we call Pioneering for You.



**“Coming up with the best solution in close partnership,**

**that’s what I call Pioneering for You.”**

Daniel Busuioc, International Projects Coordinator  
Group Competence Team, WILO SE Hof/Germany

## Reliable solutions for all phases of the water transport.



**You can rely on that.**

We provide you with personal support in every phase of the project, from design and configuration, through to commissioning and maintenance. And our systems and product solutions set new standards in terms of technical performance, cost efficiency, security standards, and durability – in all applications relating to water transport.

**Answers to today's questions.**

The systematic, reliable, and efficient supply of potable water for the entire population is one of the most important tasks for a community – both in industrialised and developing countries.

Legal requirements and regulations relating to potable water are becoming more stringent, especially in highly developed countries. This can be seen by the different certifications for potable water approval, such as RoHS and ACS. Increasing demands are therefore being placed on the material of pumps and systems used. Legislative initiatives such as ErP are also making advanced control and monitoring systems necessary.

At the same time, global mega trends such as urbanisation are escalating the need to rely on ever more efficient systems. Since more and more people are living in big cities, the requirements for a reliable, stable water supply are growing.

This brochure introduces a selection of applications relevant to the topic of water transport. This is only a small section of our entire portfolio. Just ask us what we can do for you.



- 1 Water & potable water reservoir
- 2 Water distribution
- 3 Pressure boosting
- 4 Professional irrigation

## Water & potable water reservoir.

A constant, even with fluctuating water levels.



### Special materials – your extra portion of reliability

Modern materials form the stable framework, guaranteeing the longest service life.

For example, in the form of duplex and super duplex steels.

- withstands substances with acidic content
- suitable for sea and brackish water
- also suitable for salt and mixed salt solutions

**Application:**

Groundwater is needed and used in many ways. After preparing the untreated water in accordance with the requirements for potable and industrial water, it is fed into the water storage or directly into the potable water network.

**Challenge:**

The transport of water from the water storage or potable water reservoirs places the most diverse requirements on pumps and systems, such as pumping to extremely low water levels. The water treatment is often aggravated in part by highly abrasive substances. These include a high level of sand or salt contents, among others.

**Wilo solution:**

The Wilo polder pump is our masterpiece when it comes to pumping lower water levels. It combines the technical advantages of a submersible motor pump with the possibilities of using a wave pump, and was developed specifically for use in water treatment plants and water reservoirs. Installation is simple and inexpensive, even in older systems, because the pump is mounted directly on the existing pipeline. With its high efficiency and high-quality materials it shows its advantages, even with regards to energy efficiency and durability.

**Wilo-Polder pump, the hard-wearing one****Design:**

- Multi-stage submersible pump as polder pump for vertical installation

**Application:**

- For potable and industrial water from tanks or shallow bodies of water
- For municipal water supply
- For sprinkling and irrigation
- For lowering the water level
- For utilisation in offshore areas

**Volume flow:**

max. 1,200 m<sup>3</sup>/h

**Delivery head:**

max. 160 m

**Special features/product advantages:**

- Deep water lowering
- Self-cooling design
- Easy installation on the ascending pipe
- Wear-resistant design due to different material versions
- Compact design
- Rewindable motors
- Impeller trimming allows individual adaptation to the duty point
- Ceram CT coating to increase efficiency possible

# Water distribution.

## Always on the spot.



### Best coated with Ceram CT

Our exclusive Ceram CT coating provides more efficiency and lower energy costs.

- promotes an increase in efficiency and helps in energy cost savings
- includes KTW approval for potable water applications
- pays for itself in next to no time
- can also be applied later

### Application:

Water distribution from below- or above-ground water storage is needed wherever there are not enough sufficient supplies of above-ground potable water or running water sources.

### Challenge:

Water must be transported to exactly where it is needed. Often great distances and differences in altitude need to be overcome. Even when there are powerful volume flows and fluctuations in demand, the pressure must be sustained. And when it comes to reliability, there can be no compromise.

### Wilo solution:

For example the Wilo Split Case Pump can cope with all of that. It is characterised by its high level of efficiency and low NPSH values. It can reliably manage volume flows up to 18,000 m<sup>3</sup>/h. The extremely easy-to-maintain design guarantees that safe operation is ensured at all times, even with extreme loads. Due to the large range of motors and materials, it can be used in a variety of applications. Thanks to the optional IE3 motor technology and exclusive Ceram CT coating, the Wilo-SCP scores even more points due to the lower operating costs.







**Wilo-CronoNorm/-VeroNorm,  
the massive one**

**Design:**

- Glanded standard pump

**Application:**

- For applications in municipal water supply, irrigation, building services and industry.

**Volume flow:**

max. 2,800 m<sup>3</sup>/h

**Delivery head:**

max. 140 m

**Special features/product advantages:**

- Modern pump hydraulics combined with best cavitation properties
- High efficiency levels at low NPSH values
- Impeller diameters adjusted to the duty point
- High operational reliability
- With energy-efficiency motors as per IE3 as an option
- Additional energy savings due to Ceram CT impeller coating



**Wilo-SCP,  
the easy-maintenance one**

**Design:**

- Axially split pump housing mounted on a baseplate

**Application:**

- For municipal water supply, irrigation, building services and general industry

**Volume flow:**

max. 18,000 m<sup>3</sup>/h

**Delivery head H:**

max. 190 m

**Special features/product advantages:**

- Horizontal and vertical installation variants
- Special versions for many different applications
- Machine monitoring with temperature and vibration sensor
- Forward-looking thanks to RoHS conformance
- KTW and ACS potable water approval optionally available
- Energy efficient thanks to optional IE3 motor technology. Additional energy saving potential due to the Ceram CT impeller coating



# Pressure boosting.

## Continuous power at the highest level.



### High-efficiency-drive – the drive of the future.

High capacity with low consumption – this is how our high efficiency drive, HED for short, plays its trump cards.

- reaches up to 94% efficiency with glanded pumps
- this exceeds the IE4 limit values as per IEC TS 60034-31 Ed. 1.
- allows extreme efficiency gains thanks to newly developed motor components with innovative materials
- shines with its exemplary efficiency and exceptional range of functions
- scores points with optimally matched unit comprising of an EC motor and electronic control



**Application:**

When gravitational systems such as water towers cannot be used for the water supply due to spatial conditions, a system is required to boost the pressure. These ensure adequate water pressure in high-rise buildings, in high-altitude inhabited areas and in plant systems, either in supply or circulation systems. Pressure boosting systems are used both in municipal water supply as well as in building and industrial technology.

**Challenge:**

The systems need to be adapted to the most diverse requirements so that even complex water circuits with a large number of consumers are optimally supplied at all times. The supply must be consistent even at great heights, the pressure must be constant despite fluctuating volumes of water, and it must be as energy efficient as possible.

**Wilo solution:**

Highly efficient systems such as the innovative Wilo-SiBoost Smart Helix EXCEL. Thanks to the interaction of new pump design, high-efficiency hydraulics, and future-proof EC motors, the pumps from this series consume considerably less valuable energy. Overall, the extraneous operating costs, which comprise installation, maintenance and repair costs, are exceptionally low. The innovative control and regulating system allows for both fast and convenient operation. This alleviates the regular maintenance and has a positive effect on the operating costs.



**Wilo-SiBoost Smart Helix EXCEL,  
the constant pressure one**

**Design:**

- High-efficiency connection-ready water-supply unit (non self-priming) with two to four parallel-switched vertically arranged stainless steel high-pressure centrifugal pumps from the Helix EXCEL series

**Application:**

- For fully automatic water supply and pressure boosting
- For pumping potable water, industrial water, cooling water, and fire water

**Delivery head Q:**

max. 79 m<sup>3</sup>/h

**Delivery head H:**

max. 159 m

**Special features/product advantages**

- Highly efficient heavy-duty system with Helix EXCEL-series stainless steel high-pressure multi-stage centrifugal pumps
- High-efficiency EC motor (efficiency higher than IE4 limit values in accordance with IEC TS 60034 31 Ed.1)
- High efficiency hydraulics, laser-welded 2D/3D
- Optimised booster management thanks to new Smart Controller with large control range and BUS communication
- User-friendly operation due to the "red button technology" and displays on pumps and control devices
- Safer and more reliable pressure boosting installation thanks to integrated design and protection of sensitive components

# Professional irrigation.

## Our best care for your growth.

### Application:

In order to mitigate the disadvantage of insufficient water supplies or to take advantage of local reservoirs, borehole pumps are often used. They support irrigation and watering somewhat in commercial agriculture.

### Challenge:

Irrigation encompasses a wide range of applications from small areas of arable land with difficult access to huge rice-growing areas with a tremendous demand for water. Besides this, there is often heavy pollution with abrasive components, for example, due to a high sand content. The pump has to overcome all of these challenges without any risk of failure.

### Wilo solution:

From cost-effective standard pumps to configurable units, we always have a tailor-made solution for you. Thanks to wear resistant components, the Wilo-Sub TWI can even pump water containing a lot of sand. It can easily cope with up to 50 grams per litre.

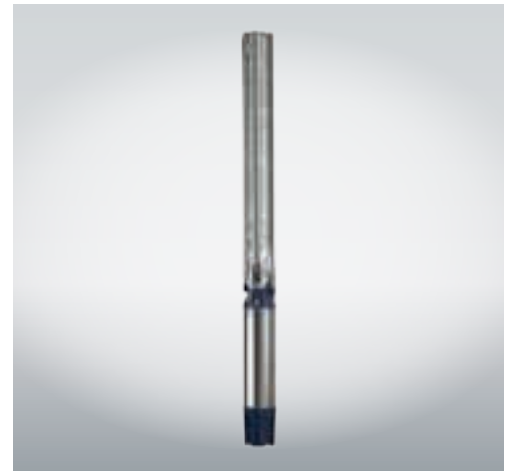


### Always professional and quick to respond

Supporting all the phases of your projects is of paramount importance to us, from design through to maintenance concepts.

- accompanied by competent experts
- working out exactly the right solution together with you
- supported by a comprehensive software package
- encompasses choosing the pump and machine technology in the municipal and industrial water supply





### Wilo-Sub TWI, the resistant one

#### Design:

- Multistage submersible pump

#### Application:

- Raw water intake, water supply, pressure boosting
- Water purification, desalination
- Rainwater utilisation and professional irrigation / agriculture

#### Volume flow:

max. 165 m<sup>3</sup>/h

#### Delivery head:

max. 500 m

#### Special features/product advantages

- Corrosion-resistant due to stainless steel design
- Greater flexibility thanks to vertical or horizontal installation options
- Easy maintenance due to quick installation and dismantling
- Integrated non-return valve for safe operation
- Extensive range of products in stock

## For us, partnership means that you achieve more with us as a partner.

Customer service always starts with a personal consultation. On this basis, we develop tailor-made individual solutions precisely for your demands. Our service then goes far beyond this. With fast and reliable repair and maintenance concepts, we also assist you in the long term.

### **Plan with our consulting.**

We are here for you and will draw up an exact assessment of what you require. From this, our specialists will work closely with you to find an individual solution.

### **You can count on our selection of pumps.**

With the help of a modern selection programme, we can offer you the most economical solution.

### **You can rely on our pump installation.**

The installation and complete connection, as well as an extensive testing and training phase of our pumps is done for you by skilled workers with many years of experience.

Wilo means "all-round service from one source".





### Your complete service package

#### Pre-sales:

- On site support
- Design support
- Product selection
- Select programme
- CFD simulations
- Flow calculation
- Pipeline calculation
- Installation drawings
- Documentation

#### Sales:

- Certification
- Acceptance testing at the plant
- Commissioning
- Start up

#### After-sales:

- Local service in 60 countries
- More than 1,200 Wilo technicians worldwide
- Individual maintenance concepts
- Customer-oriented replacement solutions
- Efficiency check
- Training





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