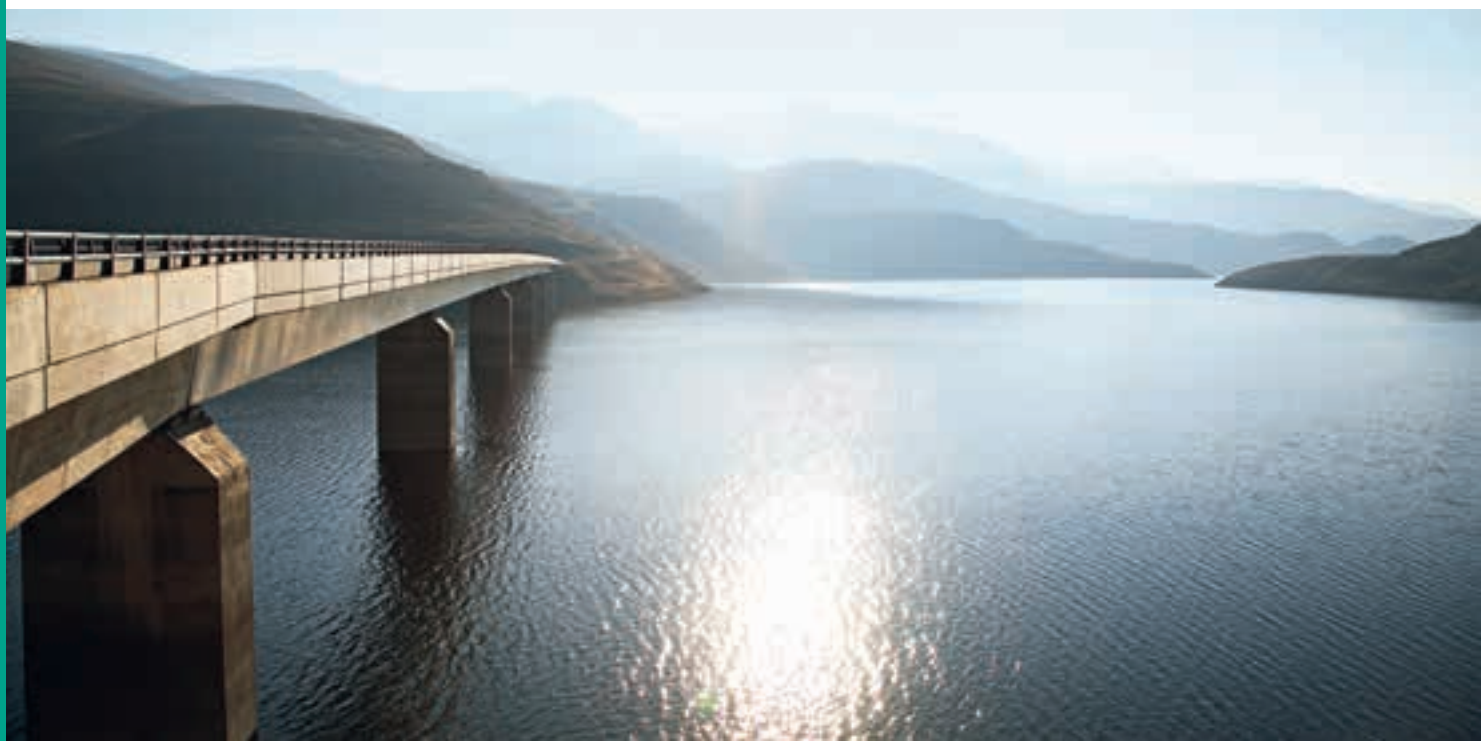
Pioneering for You

Application brochure

Wilo systems for raw water intake.
Solutions for wells and surface waters.



Wilo –
Pioneering for You.

We are there for you worldwide.

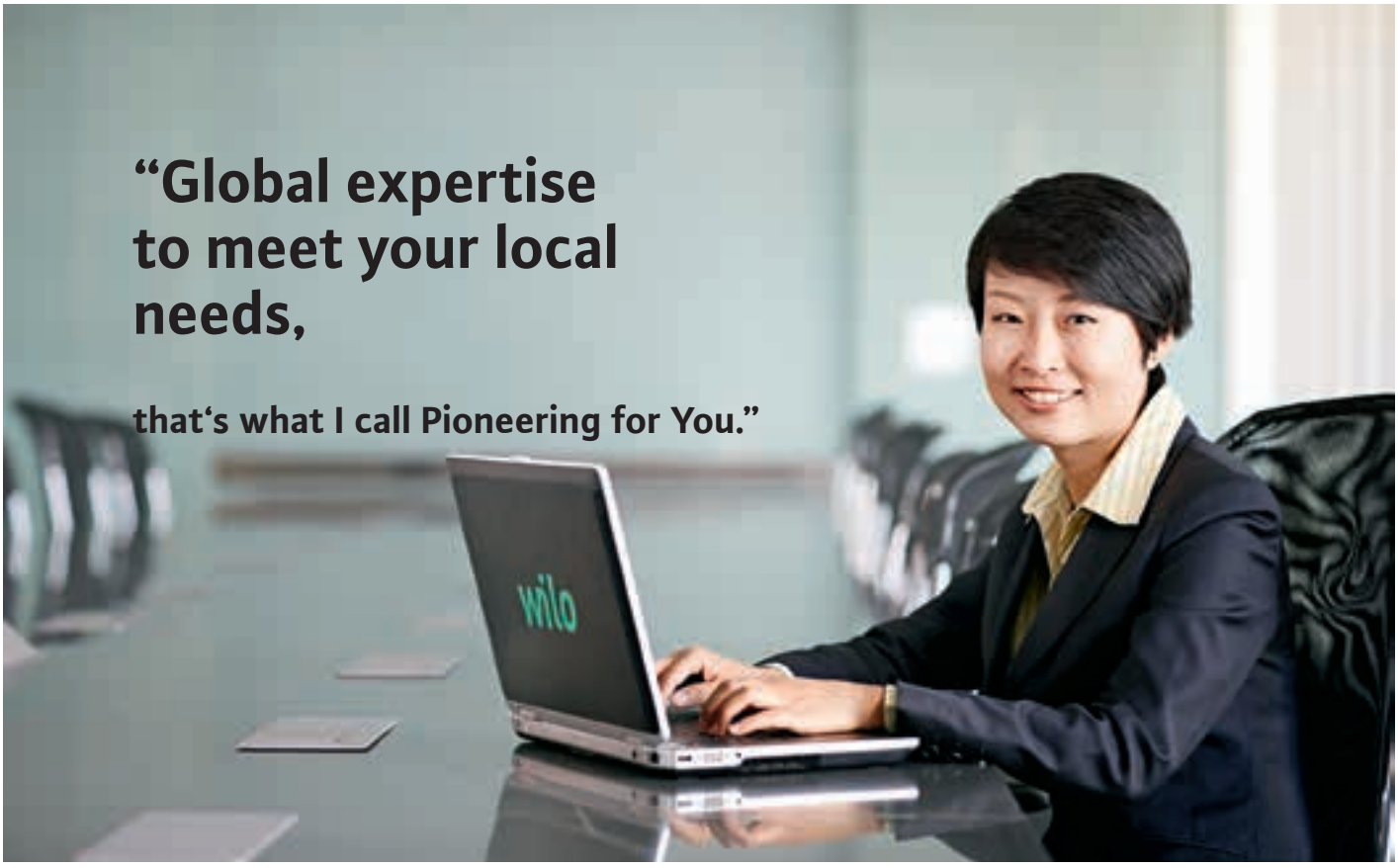
Since 1872, we at Wilo have been turning visionary ideas into intelligent solutions that regularly set new standards in the industry. The goal of our company founder, Caspar Ludwig Opländer, was to use his *Kupfer- und Messingwarenfabrik* to improve and facilitate the supply of water to people. It was 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.

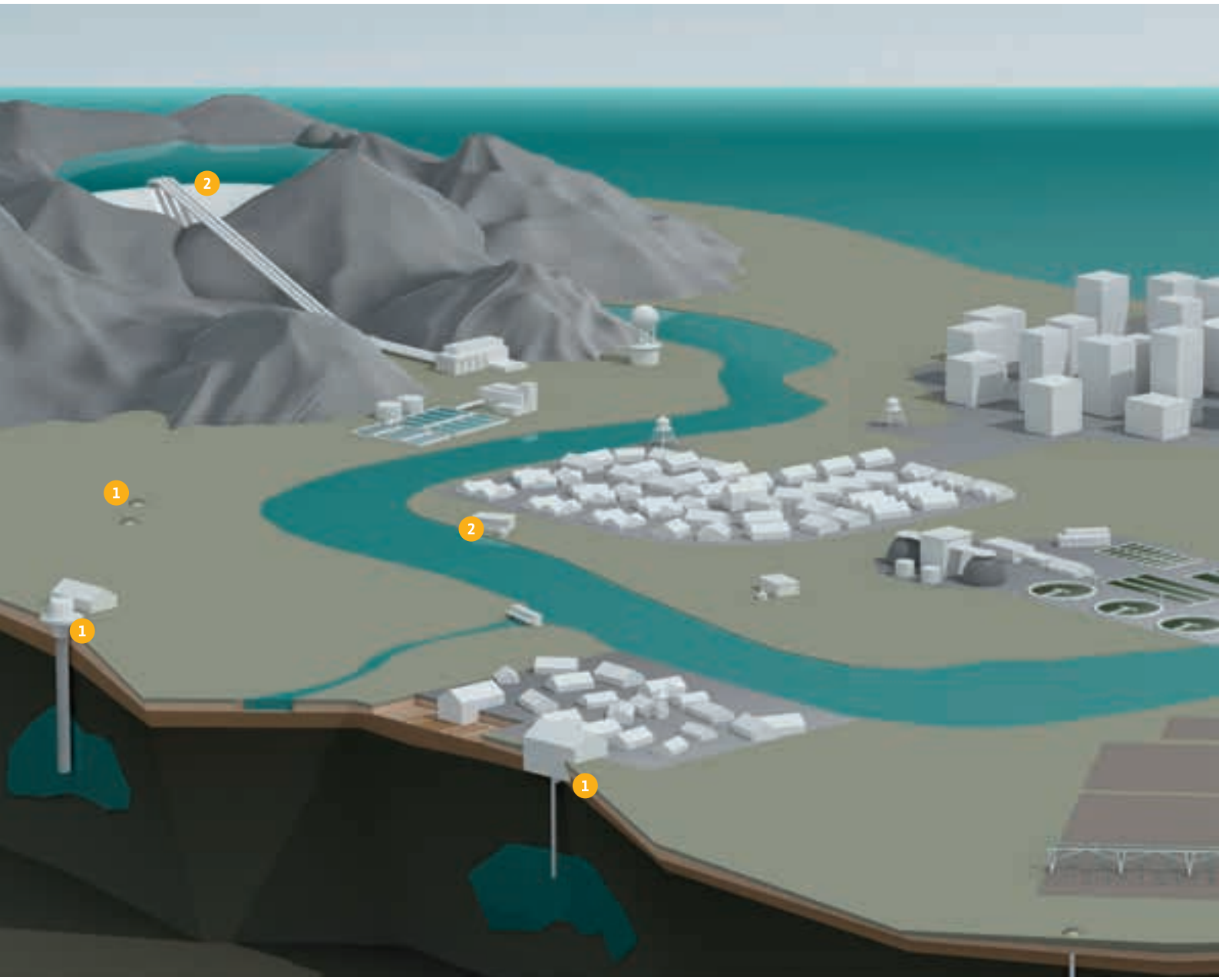
With over 7,500 employees and 60 production and sales companies all over the world, we personally see to it that the desires and requirements of our customers and users – whether specialist consultants, operators, or general contractors – are optimally met every day. This means making your life and work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

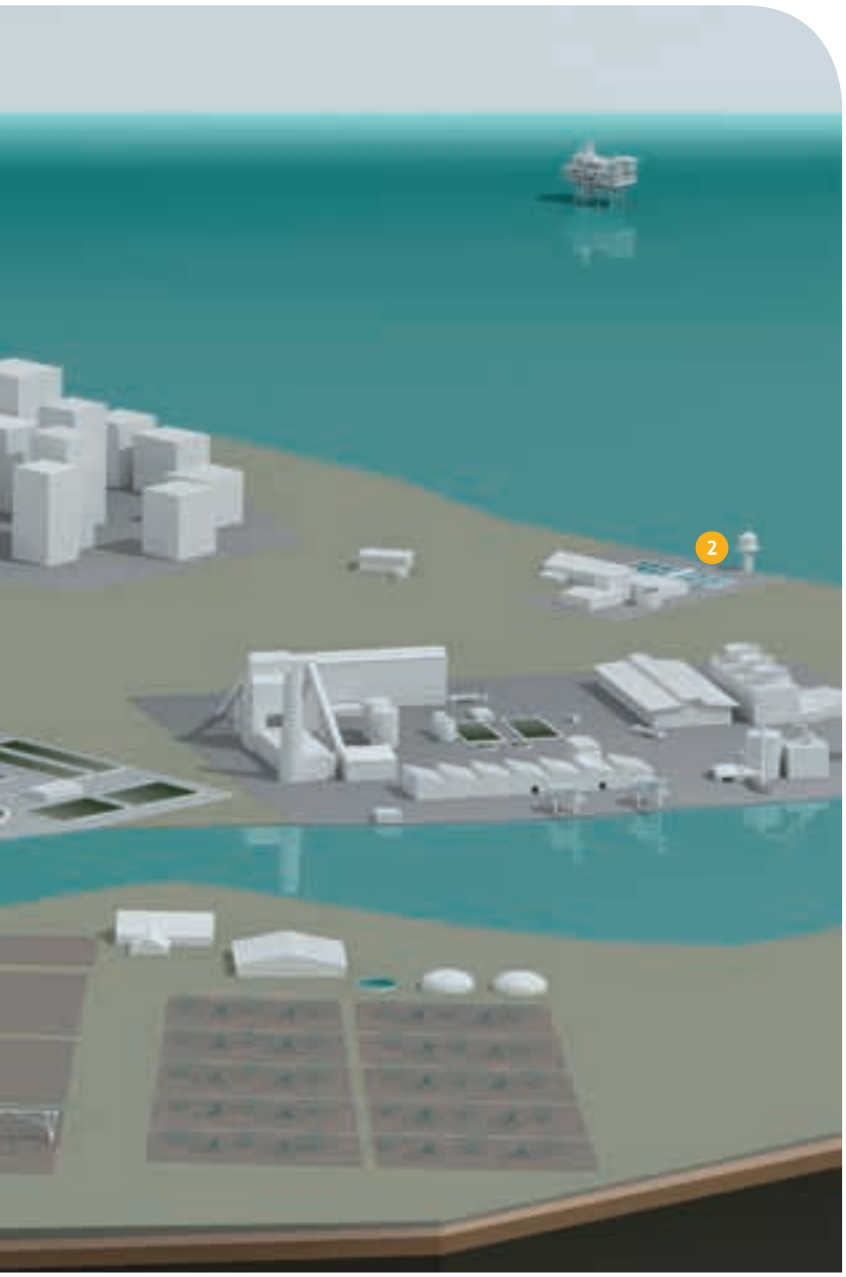
"Pioneering for You" is our commitment to a clear customer focus, strict quality orientation and strong passion for technology. In times of dwindling natural resources, the responsible management of water is an extremely important task, which is why we are committed to providing pioneering developments, 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.



Hu Mei, Water Management
Technical Support, WILO China Ltd.

Reliable solutions
for the intake of water from different sources.





1 Raw water intake from wells
2 Raw water intake from surface waters

A global challenge.

Due to the unabated growth of the global population, water is becoming increasingly scarce. Furthermore, out of all the freshwater resources, only a maximum of 1% is available as surface water in lakes and rivers. To ensure a reliable water supply for the future, efficient pumping methods are important or measures need to be taken to open up new sources such as desalinated seawater or groundwater aquifers. From an ecological perspective alone, the more responsible use of our water resources is called for. The shortage of water is also reflected in the continuously rising prices.

Wilo gives answers.

Environmentally friendly system solutions that work economically are sought after for the intake of water. With Wilo, you are on the safe side as regards these two points. We provide system solutions for extracting water from sources for every area of application. Thus, we can offer you an extensive product portfolio that meets the individual requirements of installation depths and demand. We provide you with personal support in every phase of the project, from design and configuration, through to commissioning and maintenance.

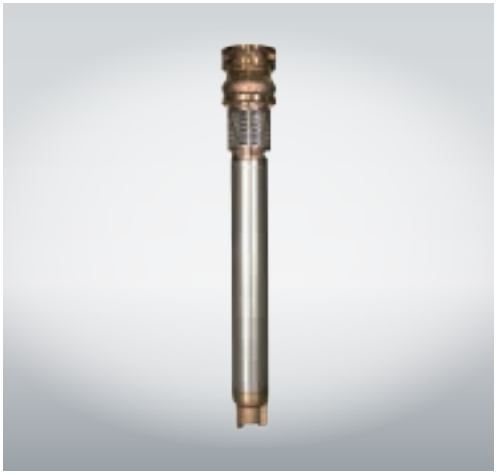
This brochure introduces a selection of applications relevant to the topic of raw water intake. This is only a section of our entire portfolio. Just ask us what we can do for you.

Water intake from wells and sumps:
Suitable solutions for volume flows of all sizes.

Application:
The pumping of spring and groundwater from wells and sumps with submersible pumps is an important basis for our security of supply.

Challenge:
The establishment and management of wells are a major cost factor in the water supply. Of great importance is comprehensive knowledge in geohydrology, water quality, water resources development options and materials, as well as flow conditions at the well. Cost factors in the management of the well also need to be taken into account: For instance a water supply well for a volume flow of 100 m^3/h per annum requires approx. 50,000 kW power for an overall delivery height of just 30 m. It adds up: After 10 years operation the operating costs have surpassed the initial investment of approx. 150,000 €.

Wilo solution:
A well has large potential savings when the pump operates at its optimal duty point. Wilo submersible pumps can be precisely adapted to the operating conditions. The installation depth and well yield determine which pump to use. Selection criteria are the best-possible efficiency for minimising energy costs and the use of suitable materials for long-term and maintenance-free pump operation. In addition, the precise trimming of the impeller diameter enables the exact determination of the desired flow capacity. This guarantees an economical solution.



CoolAct motor technology – innovative and efficient.
The CoolAct motor series with internal active cooling ensures maximum output with a low motor diameter.

→ uses internal active cooling system, therefore no external cooling jacket is necessary
→ increases performance by up to 25% compared to conventional motors
→ reduced investment and construction costs due to smaller installation diameter
→ operates with a performance range from 75 kW to 630 kW (50 Hz)
→ ensures lower operating costs due to optimal efficiency

Wilo-Zetos, the tailor-made one

Design:
- Submersible pumps with staged construction and radial or semi-axial impellers

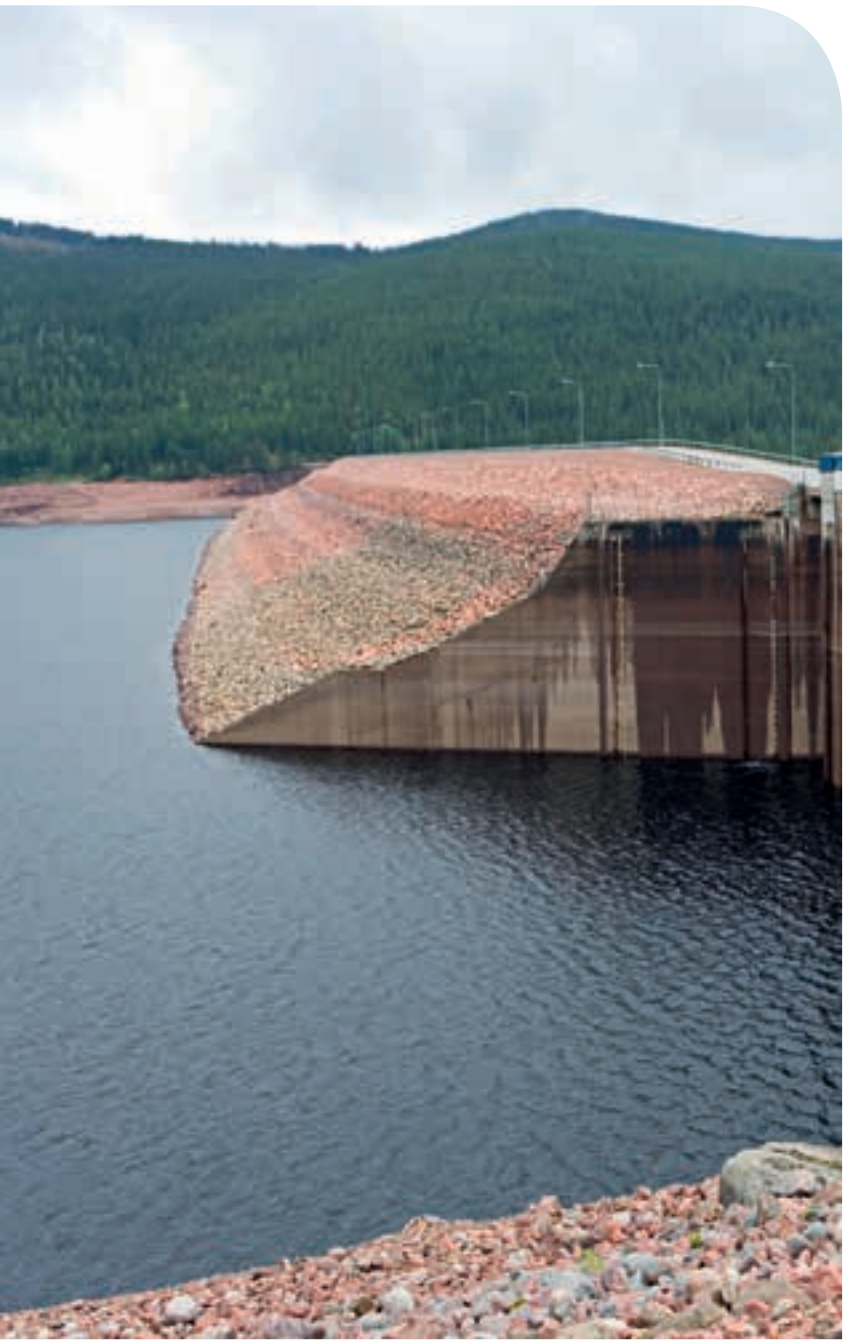
Application:
- Raw water intake
- Potable water supply from boreholes and water tank systems as well as pressure boosting
- Irrigation and sprinkling

Volume flow:
max. 2,400 m³/h

Delivery head:
max. 260 m

Special features/product advantages:
- Tailor-made solutions for individual customer requirements from 10" to 24"
- High-efficiency pump
- High operational reliability due to high quality material for higher resistance to corrosion
- Easy to maintain and repair
- Optionally with CoolAct motor technology
- Additional energy savings due to Ceram CT impeller coating

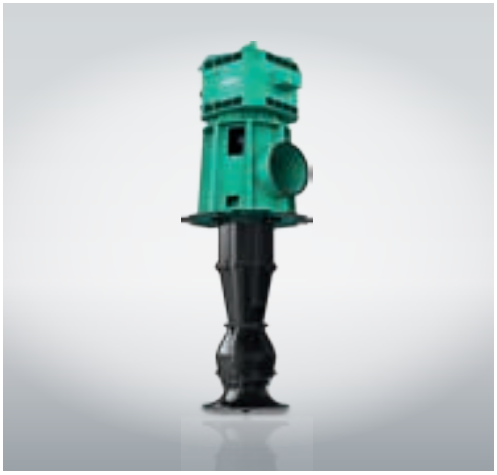
Water intake from surface waters:
Reliable in every respect.



Application:
Wherever large quantities of water are needed, the extraction of surface water is frequently required. By using shallow wells in lakes or rivers, water is pumped and transferred, for example, for water treatment.

Challenge:
Municipal suppliers as well as industry require large quantities of water on a daily basis. Efficient methods and the development of new sources such as desalinated seawater or aquifers are possible options in securing future supplies. Ecologically and economically high standards are already being applied to the intake of water from lakes, dams, rivers, and seas.

Wilo solution:
Wilo has pumps and systems that ensure a sustainable water supply. We can even overcome changing water levels in reservoirs, for example, with the greatest of efficiency and high operational reliability. For the extraction of water with corrosive and abrasive elements we use resistant materials such as duplex and coatings such as Ceram or Ceram CT. They withstand attacks from aggressive substances and allow long-term pump operation.



Wilo Vertical Turbine, the strong one

Design:
- Vertical turbine pumps for dry well installation with submerged axial or semi-axial hydraulics

Application:
- For municipal and industrial water supply

Volume flow:
max. 50,000 m³/h

Delivery head:
max. 450 m

Special features/product advantages:
- Project-based solutions – tailored to each customer's requirement
- High hydraulic efficiency
- Suitable for very large volume flows
- Different materials and designs

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 m³/h

Delivery head:
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 Ceram CT impeller coating

Best coated with Ceram CT

Our exclusive Ceram CT coating is the guarantee for more efficiency and less energy costs.

→ increases efficiency and helps saving energy costs
→ has the KTW approval for potable water applications
→ pays back in no time at all
→ can also be applied at a later point of time

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

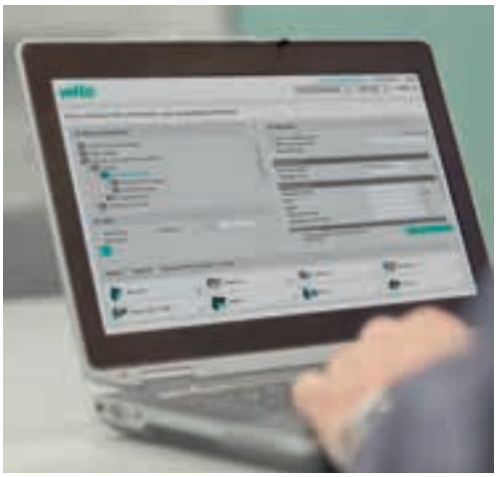
Customer service always starts with a personal consultation. On this basis, we develop tailor-made individual solutions precisely for your demands. Our service then goes far beyond this. With fast and reliable repair and maintenance concepts, we also assist you in the long term.

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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Pioneering for You

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