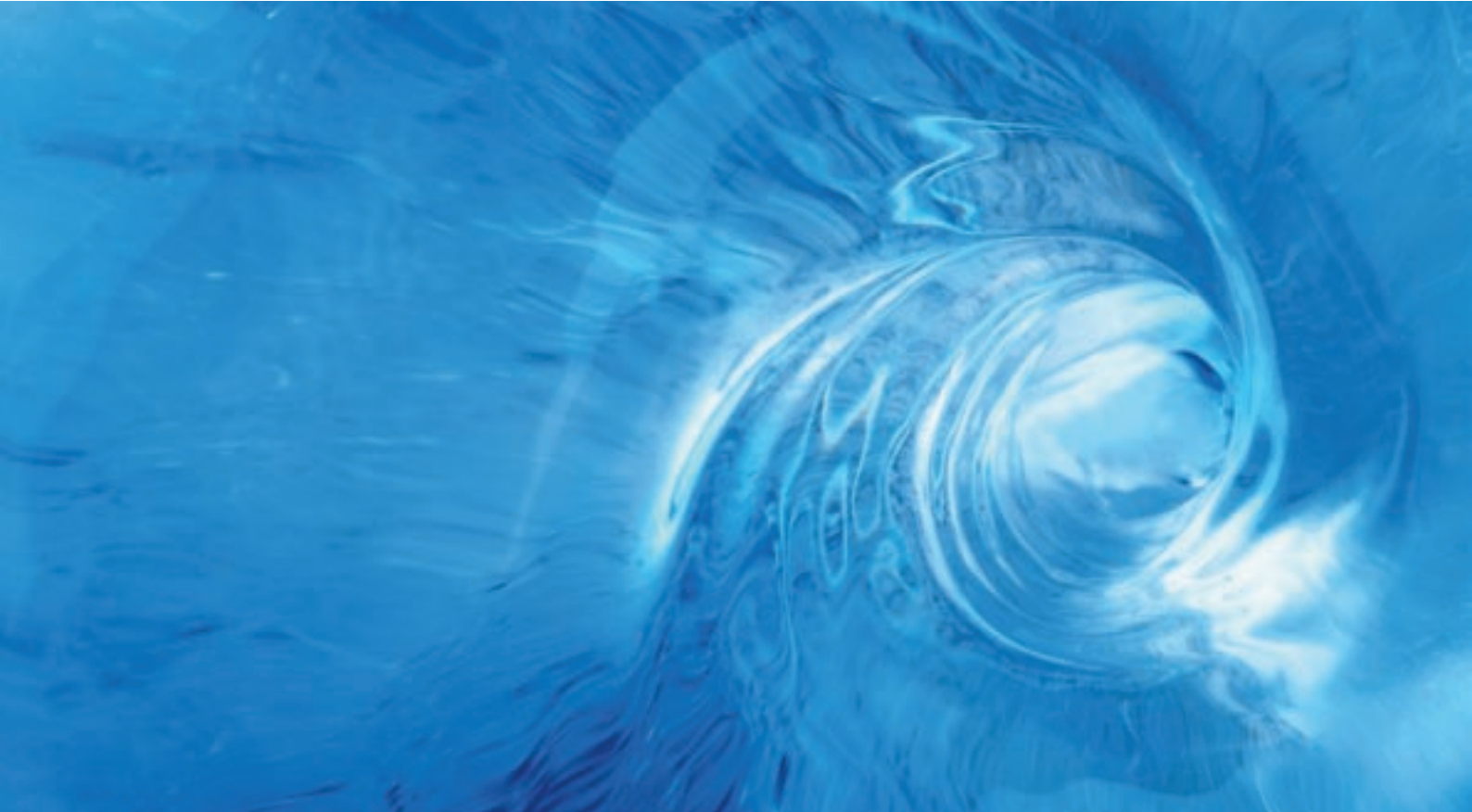


**The company that keeps it moving**



## Discover the world of KSB.

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From **minor** miracles to **major** innovations.

From **unique** products to solutions that prove themselves **daily**.

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Customers can rely on KSB for top-class quality, right across the range from familiar standard pumps like Etanorm to complex tailor-made units like the SalTec® energy recovery system for desalination processes.







**1953**

The company moves into the Asia-Pacific market with a subsidiary in Pakistan.



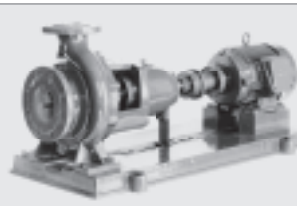
**1954**

KSB builds the first-ever barrel-type boiler feed pump for a 100-megawatt steam power plant run by Chemische Werke Hüls, Germany. The pump set delivers a discharge pressure of 409 bar.



**1964**

Jacob Klein's adopted son Dr. Otto Klein-Kühborth hands over his qualified majority holding of the company's share capital to the KSB Foundation. This puts the KSB Group on a firm footing for long-term development.



**1965**

KSB launches the CPK standardized chemical pump series, developed with German chemical companies the previous year.



**1968**

The first boiler circulating pump with a flow rate of over 1000 cubic metres per hour and an efficiency of more than 84 percent goes into service.

KSB takes compact valve technology a step further by launching the BOA-SuperCompact globe valve with slanted soft seat.

**1998**

The largest boiler feed pump ever produced by KSB, with a drive rating of 40 megawatts, goes into service at the lignite-fired Niederaussem power station near Cologne in Germany.

**2001**

KSB strengthens its position in Europe by acquiring a Dutch and a Spanish pump company.

**2003**

KSB introduces "SalTec", a new system for use in reverse osmosis (RO) seawater desalination. The system uses hydraulic power transmission to cut energy costs compared with conventional turbine-based solutions.

**2004**

KSB has more than 30 manufacturing sites worldwide, with subsidiaries and representatives in over 100 countries.

**Today**





## We grow with your **questions**. You'll grow with our **answers**.

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We get the world moving. Promise. KSB is a leading supplier of pumps, valves and systems. They provide efficient and reliable solutions to the challenges of fluid transport.

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Wherever you want water to come or go, KSB sets everything in motion to provide the world's most modern pump and valves. In fact, our products move far more than just water. They transport and manage virtually every type of fluid, and cope with any imaginable temperature, composition or hazard potential. KSB pumps and valves work just as reliably in the water and waste water sector as they do in industry, building services, power stations and mining.

As well as technical components, customers also ask KSB to develop complete plant systems and individual service concepts. Our answers include intake structures, pumping stations, pressure boosting or heating regulation systems, and comprehensive service packages.

KSB solutions always bear the entire system in mind. Our ideally matched open- and closed-loop control systems and sophisticated hydraulics ensure that all the components work together perfectly. Which keeps our customers' plant performance up, and their energy costs down.

Inside the casing for a cooling water pump 24 metres high. The complete pump set weighs 130 tonnes.



## Our products are a **hot** favourite in industry. Even for **ice-cold** orders.

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Some of our customers want to transport hot oil. Others want to make artificial snow. Whatever your branch of chemicals, petrochemicals or other industries, you'll find that KSB pumps and valves withstand extremes of temperature and pressure.

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The Nori® 40 shut-off valve from high-grade cast steel ensures reliably controlled flow of thermal oil at more than 400 °C.



Aggressive, corrosive, explosive, solids-laden or viscous fluids, high pressures and extreme temperatures: our products carry on performing under the toughest conditions. KSB uses specialist materials and intelligent design to ensure top reliability and safety across industrial and process engineering applications. Our products transport acids, alkaline solutions and oils just as securely as fire-fighting water. Hot water and heat transfer systems require our pumps to move fluids at up to 400 °C. At the other end of the thermometer, snow cannons use our high-pressure pumps to turn “wet” into “white”.



Multitec high-pressure pumps boost snow cannons just as well as industrial plants.



## We want to generate **more** energy. While using **less** of it.

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Just like water, electricity needs to flow. Our power station pumps help to produce more energy. And we help them consume less themselves.

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Energy is in high demand. Consumption continues to increase. So power stations have to run very efficiently and reliably. Advanced technology from KSB lets utility operators produce more and more power from less and less fuel. They want to generate electricity with maximum efficiency and minimum environmental impact. So the boilers have to run at very high pressures and temperatures. Even under these extreme conditions, our pumps and valves keep powering along. Increasing efficiency is also a question of design details – like KSB's special cellular surface wear ring. This reduces internal leakage loss in

boiler feed pumps, extends the units' service life and increases the entire facility's operating reliability. We also make special valves from highly creep-resistant materials. They can withstand temperatures of up to 650 °C and pressures over 600 bar. Which guarantees the highest safety standards in every type of power station.

Equipment in high-output power stations has to withstand extreme pressures and temperatures. KSB design and materials ensure that CHTD turbine-driven feed pumps do exactly that.





## We improve life by **bringing** water in. Or **taking** it out.

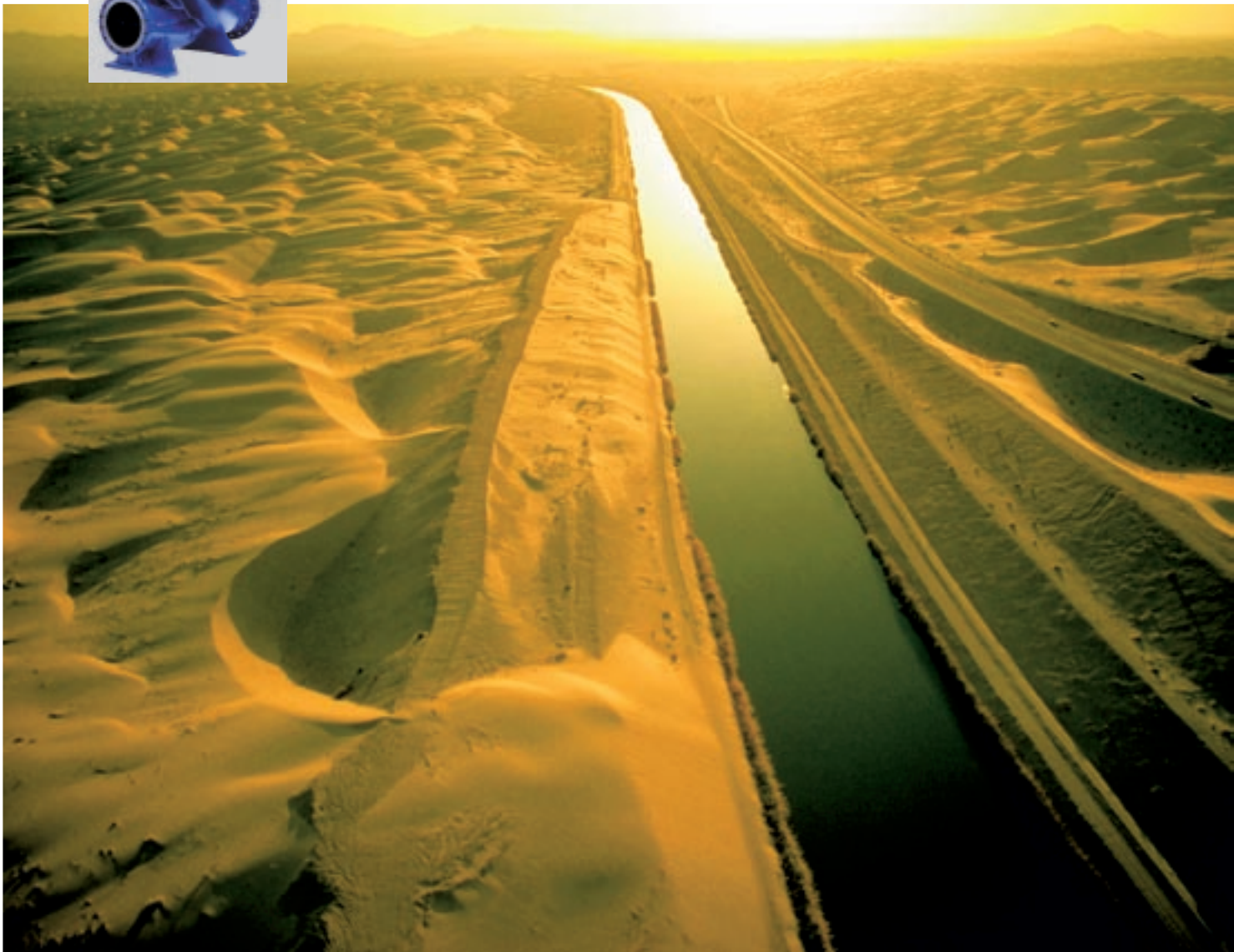
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Water is the stuff of life – if the quality and quantity are right. We supply desert-dwellers with vital drinking water. And use low-lift pumping stations to keep flood-prone areas safely drained. Our waste water pumps help industry and towns protect the environment.

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Where water has to reach arid zones, RDLO volute casing pumps provide the high flow rates to match.



Around the world, millions of people have inadequate water supplies. Millions more live in areas frequently flooded by rivers or oceans. State-of-the-art KSB technology is good news in both cases. Where people and crops need water transported over vast distances, our pumps ensure massive flow rates. A large volute casing pump for pipelines can transport up to 10,000 cubic metres of water every hour. Low-lift pumps with impeller diameters up to 2.65 metres can drain more than 60,000 cubic metres

per hour from areas threatened by flooding. All around the world, our products keep wells, pumping stations, water treatment plants, flood control facilities and agricultural irrigation or drainage systems running smoothly. Our Mammoth butterfly valves come in diameters of up to three metres for water pipelines. Sewage works operators use KSB pumps for waste water and sludge, and value our high-performance mixers and tank cleaning units.

SEZ series tubular casing pumps help large volumes drain away quickly. They play a key role in flood control.



## In building services, we aim to stay up **top**.

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Our products serve every building level from underground garage to skyscraper roof. For example in hot water circulation, drinking water supply or waste water disposal.

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KSB sets its sights high. Building services are a case in point. Our pumps are at home in skyscrapers across the globe. They will, for example, be cooling the world's tallest tower, the "Burj Dubai". KSB pumps and valves are at the heart of numerous hot water, heating, air-conditioning and waste water systems in offices, airports and industrial complexes. Automation solutions like the PumpDrive variable speed system or the "LevelControl" system make life easier in high-rise blocks' complex water, cooling and heating systems. They also lower the pump units' operating costs.



The Hyamat pressure boosting unit takes water all the way to the top storey. Its intelligent speed control cuts pump drive energy consumption to a minimum.



## And we get to the **bottom** of any mining challenge.

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Whether miles underground or open-cast, we always dig deep for the best solution to solids hydrotransport.

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Mining is tough. KSB has the skills to match. And solutions made from the latest abrasion-resistant materials. Our American subsidiary GIW Industries supplies slurry pumps for transporting solids-laden mixtures in mines, coal or sand processing and suction dredgers. In Mongolia, we are digging into the record books. The country's Erdenet copper mine uses one of the largest slurry pumps ever built – to move up to 15,000 cubic metres per hour of mixed mud and stone. A variable speed 3000 volt motor helps keep the giant's running costs at rock bottom.



Slurry pumps have to transport highly abrasive mixtures. To increase their service life in the face of such challenges, KSB has developed extremely wear-resistant white cast iron.



## Tell us your **wishes**. We'll turn them into **technical reality**.

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Your demands on our technology drive all our activities in Research and Development. Our technicians and engineers want KSB to find new solutions quicker than anyone else – solutions to the latest requirements in fluid transport. So that sharpening up our technology makes you even more successful.

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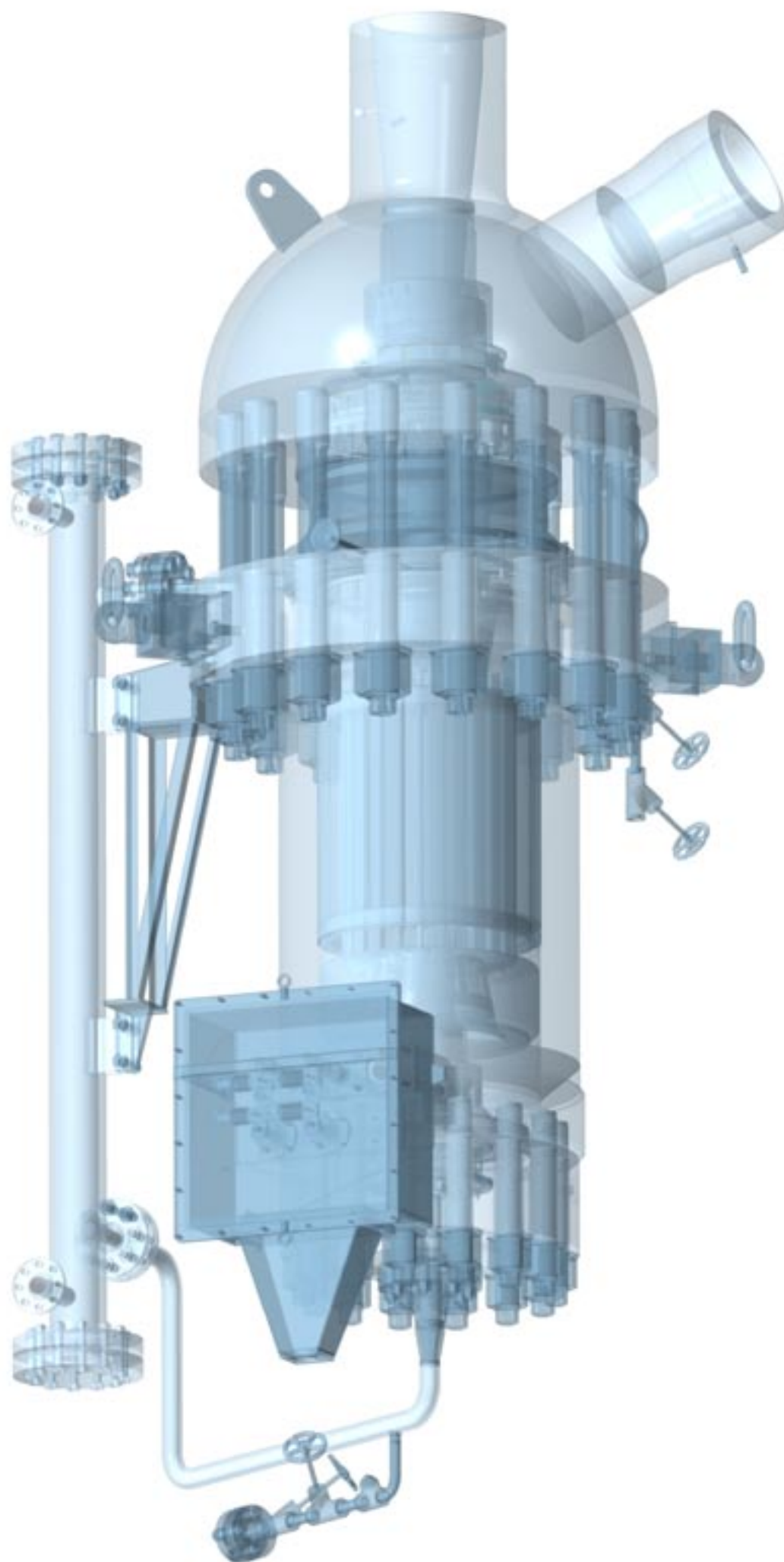
Close cooperation with customers determines our search for better products. KSB specialists in hydraulics, materials technology and automation carefully analyse market needs, and develop solutions that will continue to meet them. Up-to-date methods get products to market faster. Computational flow simulation improves pumps' and valves' hydraulic characteristics. Numerical modelling helps predict alloyed materials' properties without expensive testing. International university collaborations give our research centres in Germany, France, India and the USA access to the latest scientific findings. So we

develop products with longer service lives, lower maintenance and energy needs, greater reliability, and improved environmental profiles.

Our research has one constant goal: to make pumps, valves and systems that perform better, suit applications more precisely and use less energy. So that you can achieve more and more with our products.

A pump's hydraulic contour determines its efficiency and energy consumption. 3-D virtual modelling lets KSB calculate ideal dimensions quickly and precisely – for example inside a boiler recirculation pump.





## We like to go **far**. To be **near** all our customers.

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To KSB, service means being anywhere you are. 2000 highly trained specialists from around 120 service centres do everything to keep your plant running the way you want it. Day and night.

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Our Service network extends across every continent. So we are always where you need us. If you want us right on hand, we can set up service centres at your sites. That keeps downtimes in important processes to an absolute minimum. And whether it's irrigation in the Sahara or refining in Siberia, we can install the pumps, valves or complete systems you choose.

KSB employees stay on call through every phase of a project. From the blueprint through installation and start-up to maintenance, repairs or an entire service package: rely on us for competent customer care. Experienced project managers coor-

dinate complete maintenance inspections in power stations or industrial plants. Our expert on-site teams use planned outages to service every single pump and valve.

Across Europe, a further 200 service partners ensure that your building services equipment keeps running smoothly.

KSB is already the European leader in pump and valve service. We are opening more service centres every year. So wherever you are tomorrow, KSB know-how will be even closer than it is today.



## We owe our success to lots of **heads**. And even more **hands**.

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A company's innovation and performance depend on its staff. So we create the environment for people to commit all their expertise and efforts to serving customers.

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World-class technology and innovative products don't happen by chance. Behind every KSB success there is a whole team of employees. An on-going dialogue with customers helps them develop new solutions to fluid transport. Years of experience and extensive knowledge make them valued business partners. Our pump and valve experts track all the relevant technical trends, keep right up to date, and know their markets inside out.

Company training centres enable continuous learning. As a successful global company, KSB coaches intercultural skills alongside technical topics.

We do everything to give young professionals plenty of exposure to practice as well as theory. Their fresh know-how blends with the skills of more experienced colleagues to achieve our common goal: to make good products even better, and turn customers into satisfied long-term partners.



## We **speak** our customers' language. And **understand** exactly what they want.

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KSB has been thinking and acting globally for decades. Our manufacturing sites, sales companies and service centres cover all five continents.

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In the modern world, people have contacts everywhere. Markets are closely interlinked. And KSB is always nearby. We have manufacturing facilities, sales companies and representatives in more than 100 countries. So our products, services and employees are never far away. That makes contacting KSB specialists very easy. Get in touch whenever you want, wherever it suits you. And let our speed, flexibility and quality work for you.





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