

► Our technology. Your success.

Pumps • Valves • Service



Water where it is needed.
With axially split volute casing pumps.



At KSB, quality, safety and reliability come hand in hand.

For 140 years customers have chosen us for our innovative, holistic approach and extensive know-how. We offer all-in-one solutions, which not only comprise a broad spectrum of pumps, valves and systems but also tailored consultancy and services. A good example of the extraordinary results are our axially split volute casing pumps: Omega®, RDLO and RDLP operate powerfully, reliably and durably in the most diverse of applications.

Wherever water is economically put into motion our axially split volute casing pumps and our expertise are sought after: We begin by consulting with our customers in the pre-project phase, we supply complete or partial solutions based on the particular specifications, and we continue to support the project right through to the end of processing and commissioning.

Our extensive hydraulic selection chart offers an optimum pump for every operating range: KSB's standardised high performers Omega® and RDLO, single-stage volute casing pumps with double-entry impellers and a large range of options, cover all possible requirements. If even larger flow rates or heads are needed, our engineered RDLO and RDLP pump sets (with one, two or three stages, and double-entry impellers) are tailored precisely to the customer requirements and conditions at the site.



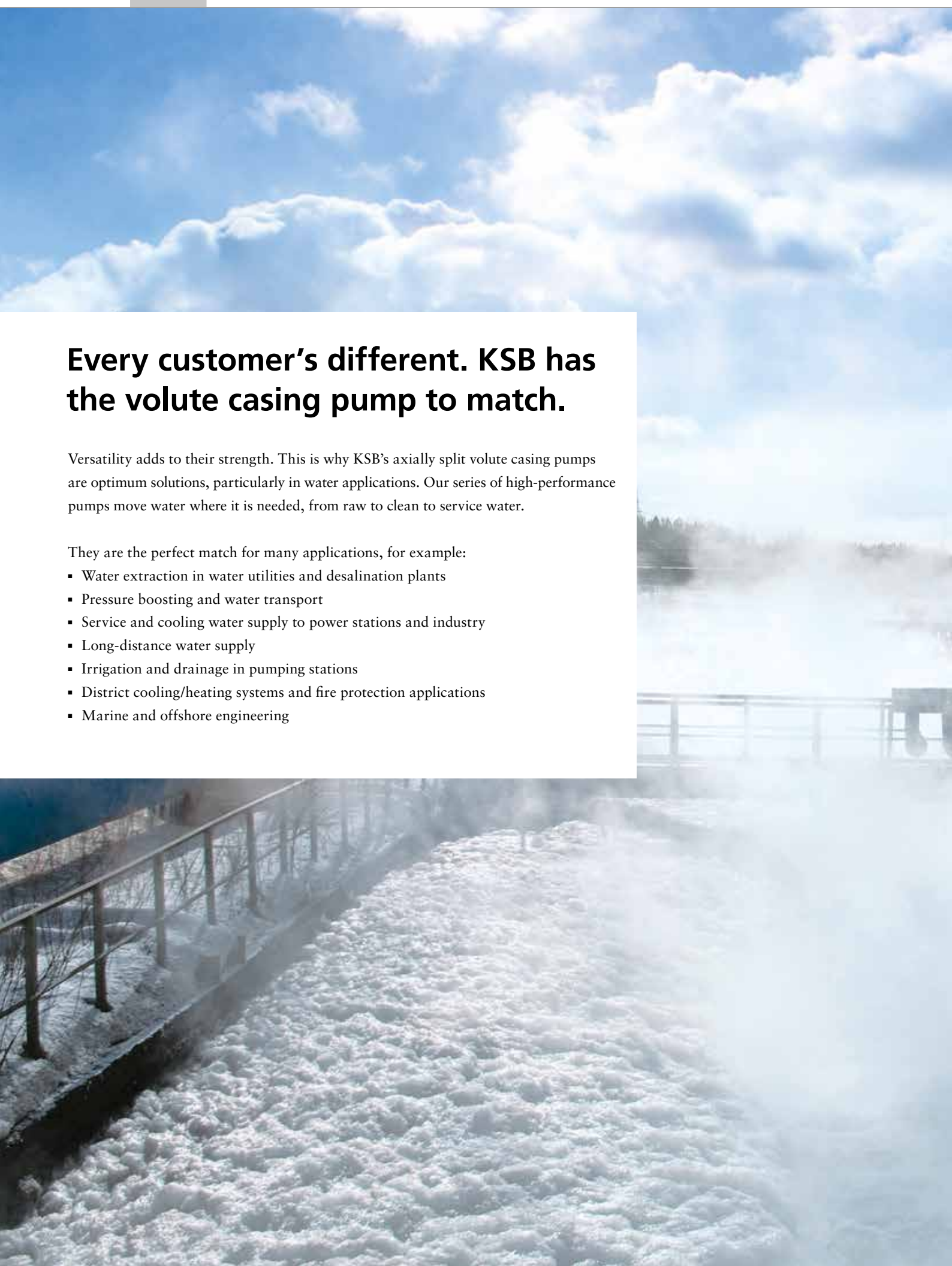


Every customer's different. KSB has the volute casing pump to match.

Versatility adds to their strength. This is why KSB's axially split volute casing pumps are optimum solutions, particularly in water applications. Our series of high-performance pumps move water where it is needed, from raw to clean to service water.

They are the perfect match for many applications, for example:

- Water extraction in water utilities and desalination plants
- Pressure boosting and water transport
- Service and cooling water supply to power stations and industry
- Long-distance water supply
- Irrigation and drainage in pumping stations
- District cooling/heating systems and fire protection applications
- Marine and offshore engineering





KSB. It's like a breath of fresh air.

A “clean” alternative: District heating and district cooling can significantly reduce greenhouse gas emissions. They also cut down on the emission of hazardous refrigerants and have a low carbon footprint. KSB offers innovative products which are specifically designed for each application.

KSB pumps – you'll really warm to them.

District heating makes use of the heat gained by generating energy. The heat is transferred to a separate hot water circuit by heat exchangers. The hot water is then pumped into the district heating network via a supply pump and its energy is transferred to a building's heating circuit via another heat exchanger. A return pump transports the “cold” water back to be returned into the heat exchange process of the combined heat and power station.

KSB pumps reliably master supply and return: namely our Etanorm®, CPK and HPK® pump series, and our axially split pumps of the Omega® and RDLO series.

KSB choice – that's what we call cool.

District cooling systems consist of a closed circuit in which supply pumps transport cold water from a central cooling unit to the individual transfer stations inside each building. Return pumps then re-circulate the water back through the cooling unit.

Cold and cooling water is supplied and returned by our high-performance Etanorm® pump series or our axially split Omega® and RDLO pumps, depending on the size of the system.

The champions line up: our axially split volute casing pumps.

Omega® Axially split volute casing pump DN 80-350

Description:

Single-stage axially split volute casing pump for horizontal or vertical installation with double-entry radial impeller, mating flanges to DIN, ISO, BS or ANSI.

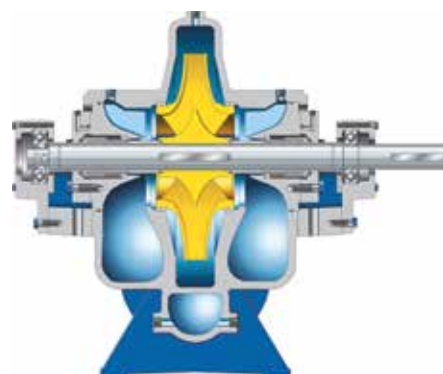
Applications:

Pumping raw, clean and service water as well as seawater in water treatment plants, irrigation and drainage pumping stations, power stations, fire-fighting systems and shipbuilding.

Higher temperatures up to 140 °C (284 °F) on request.

Technical data:

DN	80 – 350 (3 – 14 in)
Q [m³/h]	2880 max. (12680 gpm)
H [m]	210 (689 ft) max.
p [bar]	25 (363 psi) max.
T [°C]	80 (176 °F) max.
f [Hz]	50 (2-pole max.) 60 (4-pole max.)



RDLO Axially split volute casing pump DN 350-700

Description:

Single-stage, axially split volute casing pump for horizontal or vertical installation with double-entry radial impeller, mating flanges to DIN, ISO, BS or ANSI.

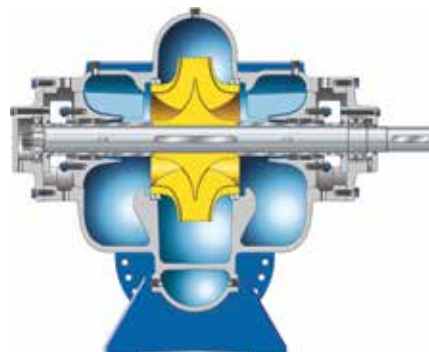
Applications:

Pumping raw, clean and service water as well as seawater in water treatment plants, irrigation and drainage pumping stations, power stations, fire-fighting systems and shipbuilding.

Higher flow rates and heads on request. Higher temperatures up to 140 °C (284 °F) on request.

Technical data:

DN	350 – 700 (14 – 28 in)
Q [m³/h]	10000 max. (44030 gpm)
H [m]	240 (787 ft) max.
p [bar]	25 (363 psi) max.
T [°C]	80 (176 °F) max.
f [Hz]	50 (4-pole max.) 60 (4-pole max.)



RDLP Axially split volute casing pump DN 350-1200

Description:

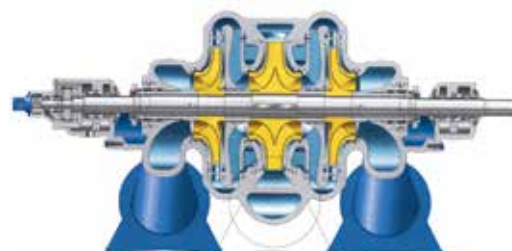
Axially split volute casing pump for horizontal installation, with one, two or three stages and double-entry radial impeller, mating flanges to DIN, ISO, BS or ANSI. Materials to DIN or ASTM in all required material combinations.

Applications:

Pumping raw, clean and service water as well as seawater. Higher flow rates and heads on request.

Technical data:

DN	350 – 1200 (14 – 48 in)
Q [m³/h]	18000 max. (79260 gpm)
H [m]	550 (1804 ft) max.
p [bar]	70 (1015 psi) max.
T [°C]	80 (176 °F) max.
f [Hz]	50 (4-pole max.) 60 (4-pole max.)

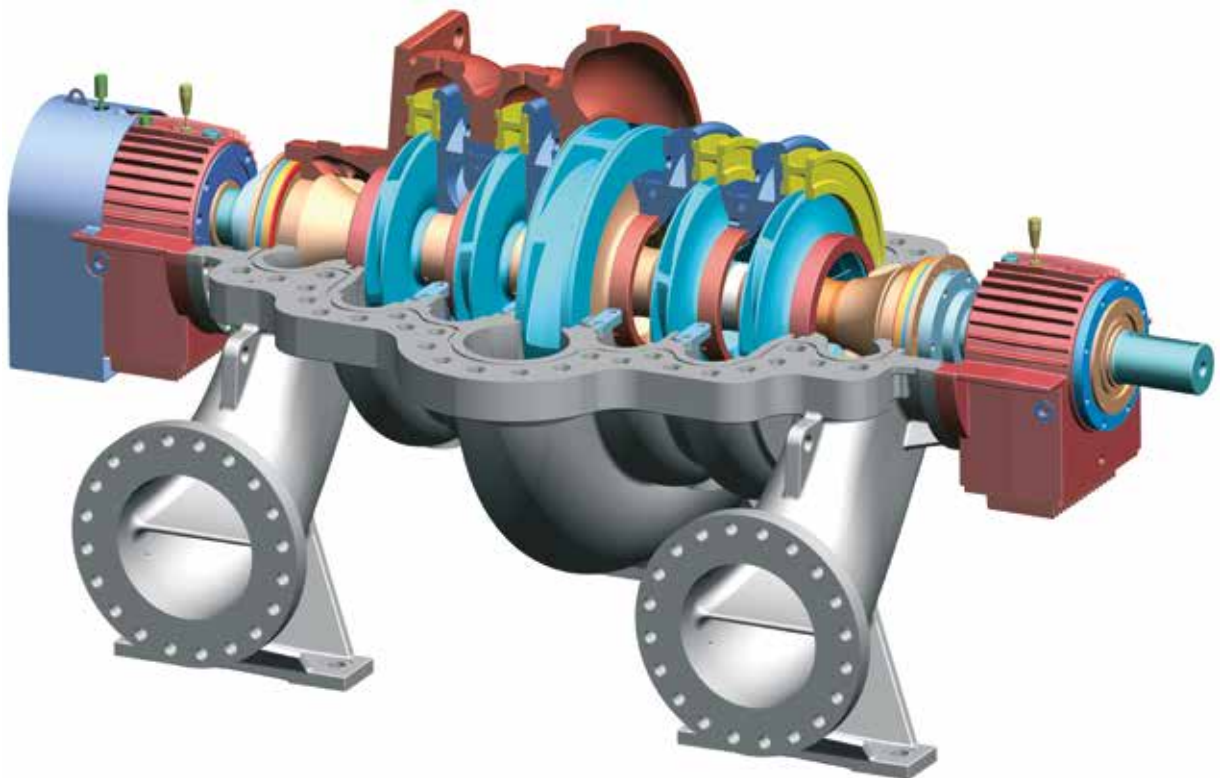


Higher flow rates and heads on request.

Team up with KSB – the systems experts who set new standards.

As a high-performance single-source supplier we focus on our products being safe, profitable and reliable. At KSB we are systems experts. We are here to help plant engineers, operators and consultants. Our volute casing pumps of the Omega®, RDLO and RDLP series – and their many benefits – are a good example:

- High operating reliability and excellent efficiencies keep operating costs down
- Service-friendly design to the world's highest standards on quality, safety, reliability and durability
- Low maintenance costs and high availability
- Sustainable pump design with low life cycle costs

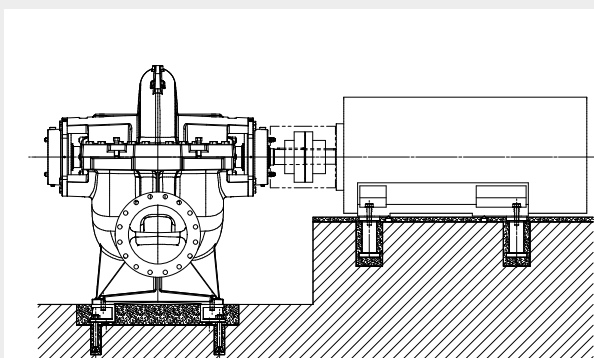


With KSB, everywhere is pole position.

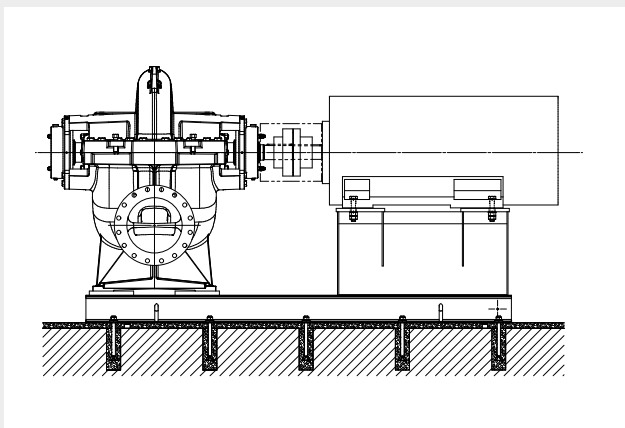
Our comprehensive and diverse product range is tailored to our customers' particular requirements. This is why we offer the most diverse of installation types, ensuring maximum flexibility and providing the right product for each application:

Horizontal installation types

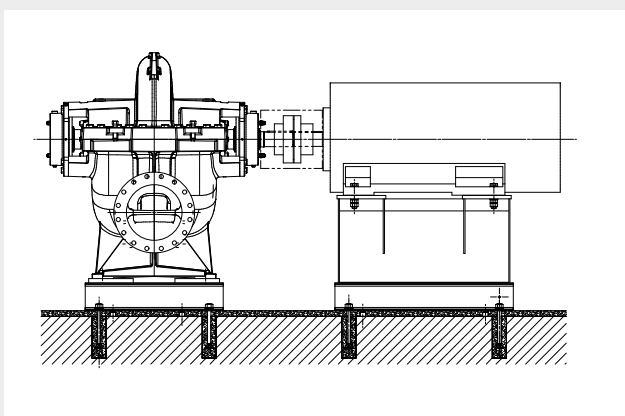
Pump and motor on foundation rails



Pump and motor on a common baseplate

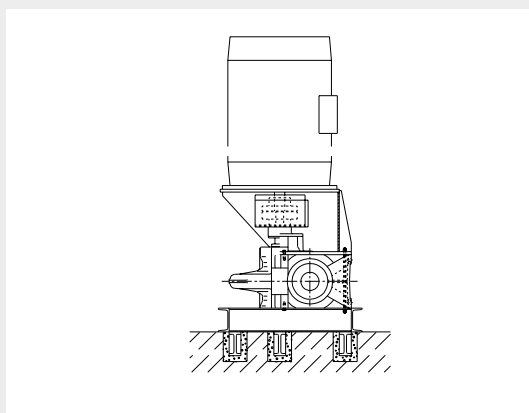


Pump and motor on separate baseplates

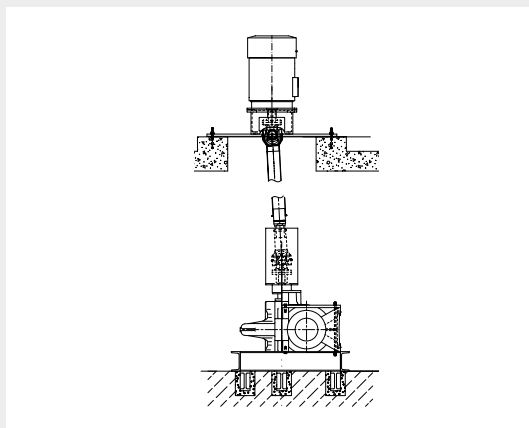


Vertical installation types

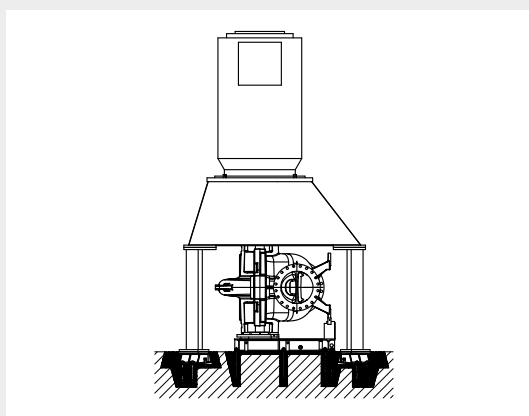
Pump with motor stool mounted on top



Pump and motor on separate levels



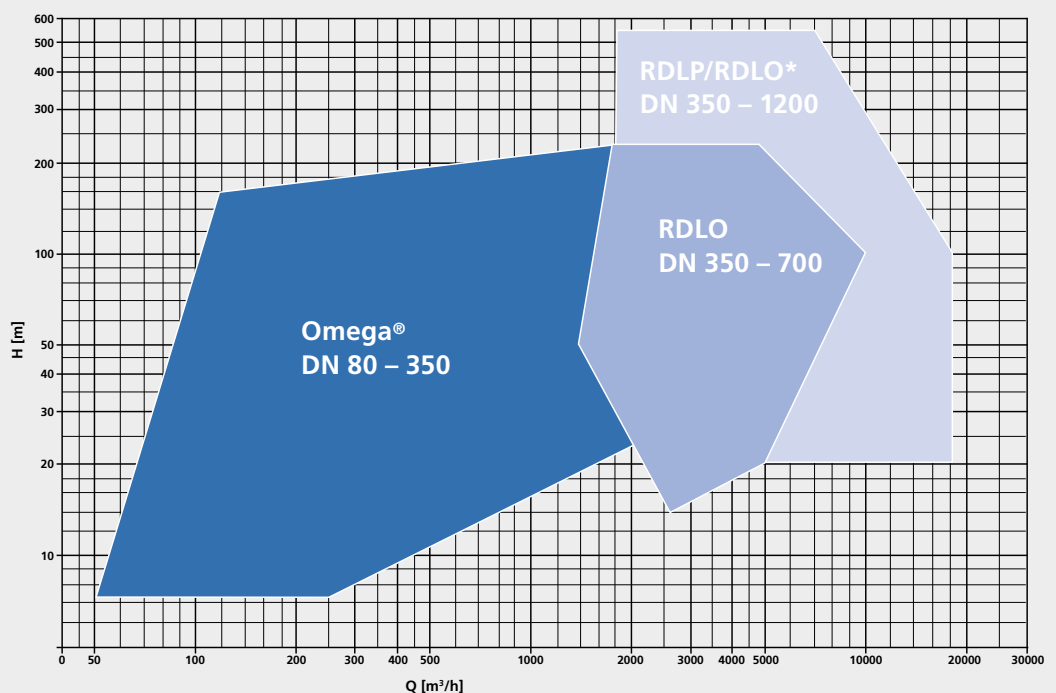
Pump with motor stool mounted separately



Whatever you need, it's here: the KSB hydraulic selection chart.

At KSB customers have much to choose from: The large and varied range of hydraulic system designs covers the most diverse of requirements and customer specifications. We have got a proverbial eye for detail. And we have used it to develop a comprehensive hydraulic selection chart, offering our customers a wide range of choice in both operating data and material variants. Providing you with an economical solution is our focus.

The many options of KSB's hydraulic selection chart:



*On request

Actions speak louder than words. Ask Omega® and RDLO.



1 Burj Khalifa Development Area, United Arab Emirates

Standing 860 metres tall, the 162-storey Burj Khalifa is the world's tallest building. The tower's air-conditioning is taken care of by a total of 31 KSB water transport pumps of the Omega® series. They are installed on pump levels which are located every 30 floors. Reliably and dependably KSB pumps transport up to 10,000 m³ of cooling water per hour. Pumps at work: 3 Omega® 100-375 A, 2 Omega® 150-360 A, 9 Omega® 150-460 A, 8 Omega® 200-420 A, 5 Omega® 200-520 A, 4 Omega® 300-435 A.



2 Yas Island Abu Dhabi, United Arab Emirates

The island of Yas, near Abu Dhabi, is home to the Yas Marina Circuit Formula 1 racing track. The Formula 1 grandstands and facilities are supplied by 9 cooling water pumps of KSB's RDLO series. Each RDLO pump has a flow rate of up to 3450 m³/h at a head of 45 m. Keeping their company at the site are further high-performance products made by KSB: 15 Omega® 350-360 A, 11 Omega® 300-585 A, and a number of Movitec and Etaline pumps.



3 Nepean Dam Deep Water Recovery Project, Australia

KSB helps supply Sydney with drinking water: Three efficient KSB pumps of the RDLO series extract raw water at the lowest point of the Nepean dam (WPS77 pumping station), and transport it to the filtration plant. Using pumps of the highest attainable efficiencies saves on power bills and considerably reduces the pumping station's life cycle costs. Being adaptable to the particular customer requirements is another strength of the design and modular system of RDLO pumps.



4 Mékhé, Senegal

KSB lead-managed the installation of a state-of-the-art pressure booster system near the village of Mékhé. The closed-system pumping station is directly integrated into two continuous pipelines. KSB supported the engineering, the complete supply and the installation of the ready-to-use pumping station. In addition, KSB provided automation software specifically written for fully automatic operation of the system. In its initial extension phase the pumping station operates at a capacity of 190,000 m³ per day, provided by 3 + 1 variable speed RDLO 400-880A pumps.



5 Taksebt, Algeria

Water from the artificial lake of Taksebt in the Algerian part of the Atlas Mountains needs to be treated and transported to the coastal parts of the country. The inflow into the artificial lake fluctuates strongly and so does the water level. KSB's solution is a pumping station with six RDLO pump sets, various valves, surge vessels and control systems. Each pump is designed for a head of about 60 m and is driven by a 1350 kW three-phase motor. The pumping station has a maximum capacity of more than 7000 litres per second.



Tomorrow's already arrived: the KSB plant in Halle.

Today's market is increasingly calling for high-performance, high-quality pumps. Our customers expect a lot of us. To provide them exactly with what they need KSB built a new production facility at its German site in Halle in 2009. This has also strengthened KSB's position as a leading pump supplier on the world market. Our new production site is a hub of expertise and in-depth knowledge for our international activities in seawater desalination, water transport, heating, ventilation and air-conditioning.

We use state-of-the-art technologies to design our axially split volute casing pumps and manufacture them using a continuously optimised production process. On our in-house test beds – suitable for electric motors with a rating of up to 10 MW – we test our pump sets under real, extreme operating conditions. This is how we make sure our products meet the highest of requirements on safety, reliability and efficiency.

In Halle – like at our other sites – we employ innovative development methods and tools to continuously optimise our products: All pump components are 3D CAD-designed and saved as 3D data. The 3D models created in the design process can be used for flow simulation as well as for strength and vibration analyses. 3D data is also made use of for casting pattern and mechanical production.

- FEM strength analysis – optimises the design and dimensions of components
- FEM vibration analysis – serves to calculate the natural frequency to prevent any damage from vibration resonance
- CFD flow simulation – helps to select and optimise hydraulic components
- CAM NC programming and production simulation



Where every step is forward.

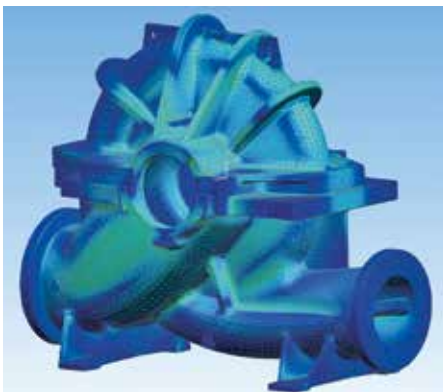
We meet high quality and performance standards – by thinking all the way, and acting accordingly. So high performance from A to Z also characterises the entire production process. All production steps are perfectly tuned to each other and cover anything the customer may need: from welding technology and mechanical production to the assembly of complete pump sets, test runs and shipment.



Safely and efficiently mounting, packaging and loading pump sets which can weigh up to 60 tonnes is facilitated by mobile working platforms, flexible hoisting platforms, and bridge and gantry cranes, for example.

Our Halle site also features a paint shop with the most modern of painting technology:

- High surface quality
- Energy-efficient paint application without paint residues
- Fast drying process by switching the system to drying mode



Tested the hard way. All the way.

At KSB we thoroughly test all our products on the test bed under real operating conditions. A successful test run is the best pre-condition for the pump to perform.

Our test bed is at the front of technology, worldwide:

- The complete RDLO series can be tested at full speed
- Suitable for pumps or pump sets with a rating of up to 10 MW
- The closed test loop ensures optimum adjustment to the suction pressure
- State-of-the-art control technology ensures efficient operation
- A frequency inverter of the latest generation enables test runs with customer-supplied motors
- Comprehensive sound insulation enables 24-hour, 3-shift test bed operation



Technology that makes **its mark**

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KSB Aktiengesellschaft
Johann-Klein-Straße 9
67227 Frankenthal (Germany)
www.ksb.com