The right partner for your project:
Heating, ventilation and air-conditioning

Technology that makes its mark

KSB Aktiengesellschaft
Johann-Klein-Straße 9
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www.ksb.com

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Our technology. Your success.
Pumps • Valves • Service
Always the right solution

It is not only large projects that place high demands on planning and implementation – equipping private homes is often a challenging undertaking as well. In particular, the adjustment to specific conditions calls for the experience gained from numerous projects and the high-quality engineering of an all-in solutions provider. With our many years’ experience as market leader we are ideally equipped to meet the specific requirements of complex systems and develop comprehensive solutions for your building.

With our wide product range we can also find the right products to equip your property – energy-efficient and reliable. For many years we have been partners of installation contractors, specialist suppliers and private individuals who we not only supply with our high-quality products, but can also offer expert advice. Research and development give us the assurance that we can offer full, cost-effective solutions in all fields: from water supply through drainage to heating and air-conditioning.

But since products alone do not make a full-range supplier, we also attach great importance to customer service. With our over 16,000 employees in over 100 countries and our partner companies we develop individual solutions to meet all requirements. This also enables us to find the right solution for your project and optimise your entire hydraulic system, so you can make the most of your savings potential.

All information on our new glandless pump range Calio for heating, ventilation and air-conditioning with KSB can be found in this brochure. And if you need further information, we will be delighted to offer you our advice.
We're big on expertise,
in every little detail

Big projects need big solutions – like exhibition hall 11 in Frankfurt, Germany. To create a pleasant climate for visitors in an area of 24,000 square metres, the system has to provide constant pressure and circulate cooling water at around 900 m³/h, so that the steadily fluctuating demand for heating can be reliably controlled.

KSB has therefore installed a perfectly matched system comprising more than 130 variable speed driven Etanorm® R/G, Etaline® PumpDrive, Rio®-Eco pumps with their matching valves to ensure that heating is evenly distributed. In addition, the Hyamat® VP pressure booster system provides the water spray system with constant pressure of 20 bar and thus increases the cooling capacity without the need for additional energy.

We make big projects worldwide a success through know-how and high-quality engineering. Years of experience and research have created the basis for reliability and efficiency on which you can depend. The new circulators of KSB encapsulate all the know-how of the innovation leader – from high-quality engineering to a comprehensive service concept.
A convincing choice of products – from warm to cool
Calio S

Don’t need much power? Calio’s little brother, Calio S, has the answer. Continuously variable differential pressure control adapts the pump’s power in line with demand. Calio S runs quietly, energy-efficiently and reliably for years and years.

Applications

Heating/venting/air-conditioning systems, industrial circulation systems, one-pipe and two-pipe systems

Benefits

- Future-proof by optimised efficiencies, exceeding the requirements of future energy efficiency regulations
- Easy to operate with symbols on the display showing the operating mode
- High operating availability due to protective and manual functions
- Savings in operating costs by high-efficiency technology and energy-saving functions
- Broad application range spanning from heating to cooling, for fluid temperatures from +2 °C to +95 °C

Technical data

<table>
<thead>
<tr>
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<th>Calio S 15-40 130*</th>
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* All variants with overall length 130 mm are supplied without heat insulation

For fluid temperatures from +2 °C to +95 °C
Heating

Calio
Calio is the number one choice for quality and technical innovation. Its new “Eco Mode” with dynamic adjustment of the differential pressure setpoint ensures maximum energy savings and a long pump life.

Applications
Heating/venting/air-conditioning systems, industrial circulation systems, one-pipe and two-pipe systems

Benefits
- Future-proof by optimised efficiencies, exceeding the requirements of future energy efficiency regulations
- Easy to operate with symbols on the display showing the operating modes
- Highest operating availability due to protective functions and redundancy
- Savings by high-efficiency technology, all-in concept and energy-saving functions
- Broad application range spanning from heating to cooling, for fluid temperatures from -10 °C to +110 °C
- Direct select of the Modbus via the display

### Technical data

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Drinking water circulation

Calio-Therm S
Drinking water circulator

Applications
Single-family houses

Benefits
- Demand-driven operation: Optimised efficiencies. Variable-speed pump or with manual setting of up to 4 speed levels
- Maximum availability: Low motor speeds and special sealing elements reduce wear to a minimum
- Simple single-button setting combined with speed control minimises commissioning and operating costs.
- Protective and manual functions of the pump keep service costs down.

Technical data

<table>
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<th>DN</th>
<th>Q m³/h max</th>
<th>H m</th>
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Calio Therm S / NCV
Drinking water circulator

Applications
Single-family houses

Benefits
- Operating point adjustment by manual setting of up to 3 speed levels
- Direct operation and operating status monitoring with level switch on front cover
- Integrated terminal box for electrical connection
- Ceramic shafts and bearings for reliable operation
- Non-overloading motor

Technical data

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<tr>
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Calio Therm NC
Drinking water circulator

Applications
From multiple dwelling to commercial buildings

Benefits
- Operating point adjustment by manual setting of up to 3 speed levels
- Direct operation and operating status monitoring with level switch on front cover
- Integrated terminal box for electrical connection via spring terminal
- Ceramic shafts and bearings for reliable operation
- Non-overloading motor

Technical data

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<tr>
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Valves from KSB

High-quality pumps already operate reliably and efficiently alone. But they work even better in an optimally matched system. For every pump application, therefore, KSB always has the right valve with which the hot water, heating, ventilation and air-conditioning systems are controlled and flow rates are matched to demand. In this way, we increase the overall efficiency of your system and save you lots of energy!
FluidFuture®: the energy-saving concept for your system

Many systems do run reliably but they also use a lot more power than necessary. The solution: efficiency optimisation with FluidFuture® in four steps. We look at the entire hydraulic system to achieve maximum energy efficiency throughout the life cycle. The optimisation costs will pay for themselves within a short period through the high energy savings that can be made.

The process and its four steps are clearly defined – based on extensive expertise and experience. This systematic and targeted approach ensures maximum savings at minimum costs. Perfectly matching the hydraulic system, drive and automation products as well as the piping dimensions can result in savings of up to 60%.

We reduce the operating costs of your system by combining our expert knowledge with smart products and services. This is our joint contribution towards an energy-efficient future.

More on FluidFuture®,
www.ksb.com/fluidfuture

Key products and services at a glance

KSB Sonolyzer® App
The free KSB Sonolyzer® app is the quickest and easiest way to identify savings potentials and avoid unnecessary measurements.
- The app analyses the motor sound of fixed-speed asynchronous motors to identify whether the operating point is inside or outside of the part-load range
- A detailed efficiency analysis is only conducted where economically viable
www.ksb.com/sonolyzer

PumpMeter
The intelligent PumpMeter pump monitoring unit continually measures the operating point of your pump and indicates whether energy can be saved.
- Complete transparency of the operating point
- The savings potential is always shown on the display
www.ksb.com/pumpmeter

PumpOperation Check
The efficiency analysis of single-pump applications is conducted using Pump Operation Check and PumpMeter.
- KSB experts use PumpMeter to record the exact operating data without intervening in the operating process
- The load profile forms the basis for the efficiency analysis and is the starting point for making specific recommendations for action
www.ksb.com/poc

KSB SuPremE®
The KSB SuPremE® IE5* pump motor is the world’s most efficient magnet-less pump motor and the best solution for a variable operating point.
- The magnet-less synchronous reluctance motors make it possible to save as much energy as possible in the part-load range
- There is no risk of demagnetisation, and the energy efficiency is at least as high as that of permanent magnet synchronous motors
www.none-more-efficient.com

PumpDrive
The PumpDrive variable speed system continuously matches the pump input power to the actual demand of the system.
- This demand-driven operation ensures energy-efficient, reliable operation of the pump
- PumpDrive offers multiple-pump operation, characteristic curve control, flow rate estimation and many other functions
www.ksb.com/pumpdrive

* IE5 in accordance with IEC/TS 60034-30-2 up to 15/18.5 kW (only for 1500 rpm types rated 0.55 kW, 0.75 kW, 2.2 kW, 3 kW, 4 kW. IE5 in preparation)