High performance valves for water and waste water applications.
Over a century of top quality pumps & valves.

We are water experts. We have to be: fluids are at the heart of our business, and water is an essential element of all fluids.

For over 140 years KSB has been a leading international pump and valve manufacturer. Over the decades, our steady stream of cutting-edge products has earned us a worldwide reputation for technologically advanced quality and performance, consistent reliability, and an exceptionally long lifespan.

Backed by a benchmark Research & Development budget, our 15,000 global employees work tirelessly to maximize customer satisfaction and meet the needs of industrial and water utilities, mining, building services and the energy sector.

Wherever water or other fluids need controlled flow or transport, KSB sets the highest industry standard for safe, efficient and innovative valve technology.
KSB valve solutions – real-time control of any water application.

KSB valves control your flows. No matter what application water requires, how the system is designed or what challenges the surrounding environment presents, we provide valves that work for every area of use. Look at our portfolio: we offer a comprehensive array of high-quality valves that meet and exceed every international standard for excellence, safety and durability.

KSB valves perform. Products like our butterfly valves guarantee safe operation of the bypass line, whether in a hydroelectric plant, a steel mill, manufacturing factories or power stations. And products like our check valves and pressure relief valves can be found in virtually every kind of water production facility, such as: reservoirs, water treatment stations, flood protection measures and biogas plants.

**Applications**

- Valve systems
- Pump protection
- Pipeline protection
- Water supply
- Anti-surge solutions for pumping stations
- Backflow control
- Water treatment
- Water extraction
- Seawater desalination
- Water transport
- Pressure management
- Pressure boosting
- Ventilation
Our range of high performance valves.

From butterfly valves to knife gate valves, KSB offers a range of flow management fittings for any application. Designed to provide long-life reliability, KSB valves deliver a high return-on-investment. Look to KSB for water valves that perform and value that lasts.
<table>
<thead>
<tr>
<th>DANAÏS 150</th>
<th>AQUARIS</th>
<th>ECOLINE GT40</th>
<th>COBRA-SMP</th>
<th>COBRA-SGP / SGO</th>
<th>SISTO</th>
<th>PSA KHG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Double offset disc butterfly valve, body and disc hard rubber coated, soft seal, dry shaft concept. Flanged connections to EN, AWWA or other standards. Face-to-face in accordance with EN 558/14.</td>
<td>Gate valve, non rotating stem with external screw, flexible wedge, bolted bonnet and back seat as standard. Flanged according EN standard. Face to face in accordance to EN 558/1 series 15 (PN 10-25) or series 26 (PN40).</td>
<td>Metal-seated gate valve with bolted bonnet, inside screw, rotating stem. Flanged connections to EN standards. Face-to-face length to EN 558/14.</td>
<td>Rubber wedge gate valve with bolted bonnet, inside screw, rotating stem. Flanged connections to EN standards. Face-to-face length to EN 558/14 and EN 558/15.</td>
<td><strong>Flanged end diaphragm valve. Shut-off and sealing to atmosphere by spiral-supported diaphragm. Body with or without lining. Position indicator with integrated stem protection. All moving parts are separated from the fluid by diaphragm. Maintenance-free.</strong></td>
<td>Flanges (DIN/ASME), butt weld ends, socket weld or threaded ends, sealing: metal to metal or soft possible, soft secondary seal, double block and bleed, fully welded design, with lever or gearbox. Optional: Polyurethane coating, emergency seal, pneumatic or electric actuators, split body (bolted).</td>
</tr>
<tr>
<td><strong>Key applications</strong></td>
<td>Water transport.</td>
<td>Water supply system, aqueducts, cooling system, petrochemical industry, snowmaking system, process engineering.</td>
<td>Water supply systems, heating systems, air-conditioning systems, general industry, clean water and building services.</td>
<td>Water supply systems, purification systems, air-conditioning systems.</td>
<td><strong>In industrial and chemical plants, in process engineering. Suitable for drinking water, service water, air, oil as well as abrasive and aggressive fluids.</strong></td>
<td>Water treatment, water transport, general industry, petrochemical industry and all related industries, power stations, gas lines and gas plants, refineries, pipelines, gas storage facilities, tank farms.</td>
</tr>
<tr>
<td><strong>Body materials</strong></td>
<td>Petroleum, gas, chemical and petrochemical industry, nuclear power stations, sugar industry, paper industry, geothermal energy, shipbuilding, low-pressure steam, vacuum service. All applications requiring offset disc butterfly valves.</td>
<td>Ductile iron, carbon steel. Other materials on request.</td>
<td>Body made of ductile iron, stainless steel stem and seats.</td>
<td>Body made of ductile iron, rubber-coated wedge.</td>
<td><strong>Cast iron, stainless steel, nodular cast iron.</strong></td>
<td>Carbon steel, stainless steel.</td>
</tr>
<tr>
<td><strong>DN</strong></td>
<td>PN max. 25</td>
<td>PN max. 40</td>
<td>PN 10-40</td>
<td>PN 16</td>
<td>PN 16/25</td>
<td>PN 10/16</td>
</tr>
<tr>
<td><strong>Flanges</strong></td>
<td>DN 50-1200</td>
<td>DN 600-2500</td>
<td>DN 50-600</td>
<td>DN 40-600</td>
<td>DN 25-600</td>
<td>DN 15-300</td>
</tr>
<tr>
<td><strong>Diaphragm actuation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Actuators, split body (bolted).</strong></td>
</tr>
</tbody>
</table>
Our range of high performance valves.

From butterfly valves to knife gate valves, KSB offers a range of flow management fittings for any application. Designed to provide long-life reliability, KSB valves deliver a high return-on-investment. Look to KSB for water valves that perform and value that lasts.

<table>
<thead>
<tr>
<th>Description</th>
<th>SERIE 2000</th>
<th>COBRA-TDC</th>
<th>COBRA-ELA / ELA-K</th>
<th>BOA-RPL</th>
<th>COBRA-SCBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure rating</td>
<td>PN 16/20/25/50</td>
<td>PN 10/16/25/40</td>
<td>PN 10/16</td>
<td>PN 10/16</td>
<td>PN 16</td>
</tr>
<tr>
<td>Size</td>
<td>DN 50 - 600</td>
<td>DN 100 - 2200</td>
<td>DN 40 - 300</td>
<td>DN 25 - 300</td>
<td>DN 50 - 300</td>
</tr>
<tr>
<td>Key applications</td>
<td>Heating, air-conditioning, water supply, irrigation, water treatment, etc. Industry: water, air, gas, etc.</td>
<td>Water supply systems.</td>
<td>Water supply systems and waste water applications.</td>
<td>Water supply systems, purification systems, waste water.</td>
<td>Water supply systems, treatment, distribution, sewage, irrigation, drinking water, sea water, air, gas, oil.</td>
</tr>
</tbody>
</table>
## Check valves, non-return valves

<table>
<thead>
<tr>
<th>BOA-RFV</th>
<th>BOAVENT-AVF / SVF / SIV / SVA</th>
<th>CONDA-VR / VSM / VLC</th>
<th>HERA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-slam, Venturi-type check valve. Flanged connections to EN standards. Max. flow velocity 2.5 m/s. Suitable for horizontal and vertical installation. Closure speed prevents water hammer.</td>
<td>Three-function, automatic air valve with one or two floats. Flanged connections to EN standard. The air valve will ensure proper operation of the pipeline network, allowing the entry and discharge of large volumes of air and release of air pockets in working conditions.</td>
<td>Direct-acting pressure relief/sustaining valve in accordance with ISO 5752-1, DIN 3202, NF 29305-1. Flanged connections to EN standard.</td>
<td>Wafer-type knife gate valve made of grey cast iron, single or two-piece body, bi-directional, with gland packing, non-rising stem, corrosion protected by epoxy coating.</td>
</tr>
</tbody>
</table>

### Key Applications
- **BOA-RFV**: Water supply systems, heating and conditioning plants.
- **BOAVENT-AVF / SVF / SIV / SVA**: Water distribution systems, clean or waste water, irrigation, raw sewage.
- **CONDA-VR / VSM / VLC**: In aqueducts as a pressure relief/sustaining valve, in fire-fighting systems for relieving excess pressure caused by pumps, in irrigation systems as an effective protection against water hammer, in industrial plants, buildings.
- **HERA**: In industrial plants, waste water and process engineering, food industry. For water, waste water and solids-laded fluids. Other fluids on request.
Automate process control with our wide range of valve actuators.

KSB offers a wide range of valve actuators for all kinds of applications and industry segments. Our portfolio includes manual, electric, pneumatic and hydraulic systems, as well as controlling and monitoring equipment.

**ACTAIR**
All 90° valves can be equipped with ACTAIR pneumatic actuator (single / double-acting).

**ACTELEC**
All 90° valves or linear valves can be equipped with ACTELEC electrical actuator (electrical actuator + gear box).

**AMTRONIC + SMARTRONIC**
All pneumatic actuators can be equipped to control the valve with the AMTRONIC control and feedback unit.
Dependable water valve solutions for all requirements.

Different needs require different solutions. KSB offers valves for any application, any situation and every customer. Whatever your requirements, KSB provides the same high level of durable quality and dependable service. Here are a few of our most popular valves:

<table>
<thead>
<tr>
<th><strong>MAMMOUTH</strong></th>
<th><strong>APORIS</strong></th>
<th><strong>BOAVENT</strong></th>
<th><strong>COBRA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dry shaft concept</strong></td>
<td><strong>Fusion-bonded epoxy coating</strong></td>
<td><strong>Full bore</strong></td>
<td><strong>Protected bolts</strong></td>
</tr>
<tr>
<td>• Only disc and rubber liner in contact with fluid</td>
<td>• Protection against corrosion</td>
<td>• High air flow capacity</td>
<td>• High reliability</td>
</tr>
<tr>
<td>• KSB AMRI rubber liner</td>
<td>• Suitable for drinking water</td>
<td>• No maintenance</td>
<td>• Long life</td>
</tr>
<tr>
<td><strong>Maintenance-free</strong></td>
<td><strong>Mechanical stop</strong></td>
<td><strong>Full polypropylene float</strong></td>
<td><strong>Anti-freeze &amp; Anti-stagnation plugs</strong></td>
</tr>
<tr>
<td><strong>Low loss of head</strong></td>
<td>• Position indicator</td>
<td>• High reliability</td>
<td>• High reliability</td>
</tr>
<tr>
<td><strong>Easy fit between flanges</strong></td>
<td><strong>Rubber-coated</strong></td>
<td>• No maintenance</td>
<td>• Long life</td>
</tr>
<tr>
<td>• Light weight</td>
<td>• Protection</td>
<td>• Anti-shock device</td>
<td><strong>Epoxy coating</strong></td>
</tr>
<tr>
<td>• Low overall dimensions</td>
<td>• Suitable for drinking water</td>
<td>• Anti-hammer device</td>
<td>• Coated internally &amp; externally</td>
</tr>
<tr>
<td><strong>Actuator range</strong></td>
<td><strong>Locking device</strong></td>
<td><strong>Epoxy coating</strong></td>
<td>• No corrosion</td>
</tr>
<tr>
<td>• Manual, electric, hydraulic, pneumatic</td>
<td>• Safety</td>
<td>• Coated internally &amp; externally</td>
<td><strong>Hydrodynamic profile</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No corrosion</td>
<td>• No cavity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Low pressure drop</td>
</tr>
</tbody>
</table>
Case studies in dependable work flow.

Our acclaimed pumps and valves keep fluids flowing around-the-clock on every continent. That's because we consistently meet the highest safety requirements, reliably enable economically efficient operations, and reassuringly provide comprehensive on-site service – 24 hours a day. Here are some of the customers whose success is backed by KSB.

1 Pumping: In Salah to Tamanrasset, Algeria

24 wells and 6 central pumping stations, a distance of 750 km, 50,000 m of water a day to 150,000 cubic meters in 2030: this is the project that the Algerian government began in 2008 at In Salah. The heart of the USD 1 billion water project is two pipelines to carry water to Tamanrasset, a Saharan oasis at an altitude of 1,320 meters. The great distance and height difference between the two cities requires services and products that withstand the most demanding technical requirements. In particular, the height difference requires high operating pressures in the pipeline and thus the use of innovative technology in the pumps. That's why KSB is there.

Customer: ADE (Algerienne des Eaux)  
Commissioned: 2010

Scope of supply
- Nearly 1,400 fixtures in total, including
  - KHG series ball valves
  - ISORIA butterfly valves

- COBRA-SGO rubber wedge gate valve
- SERIE 2000 double-check valves disc
- Piston check valves with cast iron casing and bronze internal parts
2 **Reservoir du Gabas (Hautes-Pyrénées), France**

The Compagnie d’Aménagement des Coteaux de Gascogne (CACG) designs, builds and operates dams, canals and high-pressure water transfer systems, as well as conducting flood risk studies and proposing amelioration and remediation projects. With a capacity of 20 million cubic meters of water, the du Gabas reservoir maintains low volumes of rivers flowing from the Pyrenees and provides for irrigation needs of farmers in the surrounding region. Here, KSB installed the MAMMOUTH DN 1400 as the station supply valve and the DN 1200 as the output valve, while ISORIA valves DN 500 and 600 insulate the six station pumps. Most of the valves installed in the stations operated by the CACG are provided by KSB – and have been for nearly 25 years.

**Customer:** Compagnie d’Aménagement des Coteaux de Gascogne (CACG)  
**Commissioned:** 2006

**Scope of supply**
- 1 x ISORIA DN 300
- 6 x ISORIA DN 500
- 7 x ISORIA DN 600
- 1 x ISORIA DN 1000
- 1 x MAMMOUTH DN 1200
- 1 x MAMMOUTH DN 1400

3 **Pumping & Transmission: Al Ain Water Transmission scheme, UAE**

TRANSCO is a subsidiary of Abu Dhabi Water & Electricity Authority (ADWEA) and is responsible for developing, operating and maintaining the high voltage power transmission and bulk water transmission networks within the Emirate of Abu Dhabi, United Arab Emirates. The Al Ain Water Transmission Scheme Project provides the total requirement of water in the Al Ain Region on a long term basis. KSB successfully supplied Double Eccentric Butterfly valves, Gate valves and Air Release valves for the Pumping Station and Water Transmission lines for TRANSCO in Al Ain Reception Complex.

**Customer:** Abu Dhabi Transmission and Despatch Company (TRANSCO)  
**Commissioned:** 2011

**Scope of supply**
- 4 x APORIS DN 1800 Butterfly valve
- 21 x APORIS DN 1600 Butterfly valve
- 24 x APORIS DN 1200 Butterfly valve
- 5 x APORIS DN 1000 Butterfly valve
- 3 x APORIS DN 900 Butterfly valve
- 4 x APORIS DN 800 Butterfly valve
- 18 x APORIS DN 600 Butterfly valve
- 5 x APORIS DN 500 Butterfly valve
- 15 x COBRA SMP DN 400 metal seated gate valve
- 22 x COBRA SGP DN 200 rubber wedge gate valve
- 22 x BOAVENT AVF double chamber air release valve
Software – digitally enhanced performance.

Performance valve hardware is a highly engineered, finely tooled piece of manufacturing genius. Performance software lets you utilize it to its fullest. KSB valve software enhances your ability to maximize the valve’s potential, and offers:

- Simulation of valve performance
- Cavitation analysis and prediction
- Stress analysis
- Fatigue analysis
- Hydraulic modeling
Tested by degrees – proven under pressure.

Over 20 million: that’s what we invest every year in Research & Development. We use that money on the latest simulation programs, company test beds and related facilities, and on testing everything from a revolutionary new idea to quality control and safety.

Our development engineers work closely with customers throughout the development phase of a product. Together they integrate stability and seismic calculations as well as sound and frequency analyses into the product plans. Together we produce a real-world product that meets real-world needs.

And a real-world product needs to be tested under real-world conditions. So, before a product leaves a KSB site, we test it under the most stringently realistic conditions imaginable – for example, on a test facility for cooling water pumps that can simulate all the operating points specified.
Technology that makes its mark

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