

**Your ideal choice, whatever the case.
Our solutions for the pharmaceutical industry.**



The right choice for sterile processes: pumps made by KSB.

For us, thinking ahead means thinking outside the box. This is the guiding principle behind our reliable, economic and environmentally-friendly solutions. Wherever our products are used, top priority is given to protecting people and the environment. This is especially important when it comes to Life Sciences applications such as life-sustaining and health care systems.

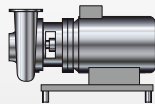
In response to the requests of our customers, we have further expanded our product range for Life Sciences applications at KSB. Our established products for handling active ingredients and for peripheral installations have won a reputation for high performance, and are now joined by a broad range of pumps for high-end applications.

The experience and expertise gained over more than 130 years as one of the world's leading suppliers of pumps and valves is reflected in our new pump programme, and enables us to develop transport solutions for sensitive and aggressive fluids to meet precise requirements. KSB's innovative solutions cater for the pharmaceutical industry's most challenging requirements.

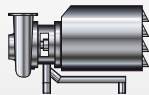
As a system supplier we can draw on comprehensive know-how and offer economic all-in solutions from a single source. We are the ideal partner for everyone who values top quality, reliability and an outstanding price-performance ratio.

KSB's pump programme for the pharmaceutical industry.

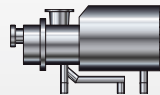
High-end processes



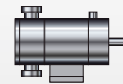
Vitachrom



Vitacast



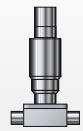
Vitaprime



Vitalobe

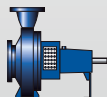


SISTO-C

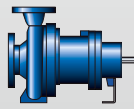


SISTO-C

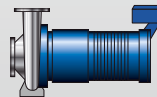
Active ingredient handling



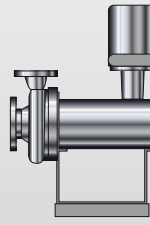
MegaCPK



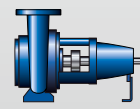
Magnochem



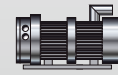
Secochem Ex



HN



KWP

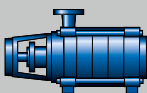


Microchem

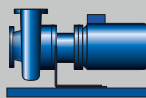


Vitastage

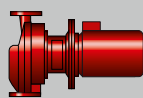
Peripheral processes



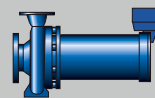
Multitec



Etabloc



Etaline



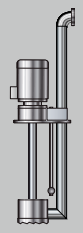
Etaseco



Amarex KRT



Movitec



MK



KSB's product range: performance meets versatility.

In the pharmaceutical industry, our pumps for sterile processes have made a name for themselves based on outstanding performance in the most diverse of applications. From catering for individual customer requirements to equipping specialised applications (e.g. transporting WFI or shear-sensitive fluids), our wide-ranging product portfolio features a pump that is up to the task.

The reliability and optimum efficiencies of our products make a decisive contribution to future-proofing our customers' systems. Based on our unique materials expertise we can offer high-quality pumps manufactured using a variety of production techniques.

Top-quality materials and innovative production processes are also key characteristics of our subsidiary SISTO Armaturen S.A. whose diaphragm valves have been used successfully in sterile processes for more than 50 years now.

Some more of the secrets behind our products' success are world-wide, uniform KSB standards and our membership in the European Foundation for Quality Management (EFQM). This is how we ensure consistently high quality and continuous product development.

A global network of service centres is provided by KSB Service GmbH. The centres offer a complete range of services from new installations to tailored service solutions.

Pumps and valves for high-end processes.

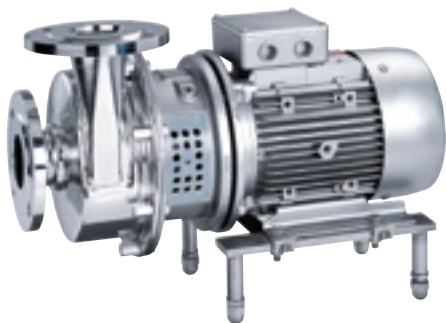
An eye for detail is essential when developing solutions tailored to precise application requirements. We aren't happy until our products perfectly match the customers' requirements on safety and reliability; it's an attitude that has helped us set the pace in our industry.

KSB offers a total of five different pump series for high-end processes. Almost any transport duty can be performed with these safe and innovative solutions. Our Vita type series ensures hygienic and sterile processes.

Pumps

Vitachrom Rolled steel centrifugal pump

Automation option: PumpDrive



Description: Maintenance-friendly annular casing pump, close-coupled with standardised motor, all wetted components made of DIN 1.4404/1.4409 (AISI 316L/CF3M) stainless steel, active flushing of the mechanical seal. CIP/SIP-compatible. Designed to meet the highest requirements on cleanability and certified to EHEDG standards by the TNO Nutrition and Food Research Institute. ATEX-compliant design available.

Application: High-end pharmaceutical processes.

Technical data:	DN	50–125
	Q [m ³ /h]	340 max.
	H [m]	100 max.
	p [bar]	12 max.
	T [°C]	+140*

These data refer to 50 Hz operation. Pump also available for 60 Hz. *Higher values on request.

Vitacast/Vitacast E Investment cast centrifugal pump

Automation option: PumpDrive



Description: Maintenance-friendly volute casing pump with standardised motor, all wetted components made of DIN 1.4404/1.4409 (AISI 316L/CF3M) stainless steel. Designed with very little dead volume, open impeller, electropolished surface, excellent efficiency, for the strictest requirements on cleanability (CIP/SIP-compatible). Certified by the TNO Nutrition and Food Research Institute to EHEDG standards (Vitacast E). ATEX-compliant design available.

Application: High-end pharmaceutical processes.

Technical data:	DN	25–150
	Q [m ³ /h]	560 max.
	H [m]	100 max.
	p [bar]	10*
	T [°C]	+140*

These data refer to 50 Hz operation. Pump also available for 60 Hz. *Higher values on request.



Vitaprime Self-priming centrifugal pump

Automation option: PumpDrive

Description: Maintenance-friendly, self-priming side channel pump in close-coupled design with standardised motor, all wetted components made of DIN 1.4404/1.4409 (AISI 316L/CF3M) stainless steel. Designed to meet the strictest requirements on cleanliness (CIP/SIP-compatible). ATEX-compliant design available.

Application: Pharmaceutical industry cleaning processes.

Technical data:	DN	40–80
	Q [m ³ /h]	55 max.
	H [m]	45 max.
	p [bar]	10
	T [°C]	+140*

These data refer to 50 Hz operation. Pump also available for 60 Hz. *Higher values on request.



Vitalobe Rotary lobe pump

Description: Maintenance-friendly rotary lobe pump in close-coupled design with standardised motor, all wetted components made of DIN 1.4404/1.4409 (AISI 316L/CF3M) stainless steel. CIP/SIP-compatible. Designed with very little dead volume and electro-polished surface. Rotary lobe design ensures gentle handling of the fluid. Suitable for transporting highly viscous fluids.

Application: High-end pharmaceutical processes.

Technical data:	DN	25–200
	Q [m ³ /h]	300 max.
	H [m]	200 max.
	p [bar]	30 max.
	T [°C]	-40 to +200

These data refer to 50 Hz operation. Pump also available for 60 Hz.





Valves

SISTO-C

With manual or pneumatic actuator



Description: Diaphragm valve with weld ends; straight-way, Y-pattern or T-pattern, manually or pneumatically operated; shut-off and sealing to atmosphere by completely enclosed diaphragm. No dead volumes, suitable for sterilisation, SIP/CIP-compliant design, visual position indicator. All moving parts are separated from the fluid by the diaphragm. Maintenance-free.

Application: Biotechnology, sterile process engineering, food and pharmaceutical industries.

Technical data:	PN	16
	DN	4–200
	p [bar]	16 max.
	T [°C]	-10 to +160

SISTO-CM

With manual or pneumatic actuator



Description: Diaphragm valve with weld ends; multi-port valves in customised design, manually or pneumatically operated; shut-off and sealing to atmosphere by completely enclosed diaphragm. No dead volumes, suitable for sterilisation, SIP/CIP-compliant design, visual position indicator. All moving parts are separated from the fluid by the diaphragm. Maintenance-free.

Application: Biotechnology, sterile process engineering, food and pharmaceutical industries.

Technical data:	PN	16
	DN	4–200
	p [bar]	16 max.
	T [°C]	-10 to +160

Pumps for active ingredient processes.

KSB's products work reliably and economically to meet all of the demands of secondary processes. This makes them highly suitable for a wide variety of exacting processes.

MegaCPK Standardised chemical pump available with two bearing bracket variants

Automation option: PumpDrive

Description: Horizontal, radially split and single-stage volute casing pump in back pull-out design, with radial impeller, single-entry, to EN 22 858 / ISO 2858 / ISO 5199, also available as variant with wet shaft, conical seal chamber. ATEX-compliant version available.

Application: Handling liquids in diverse processes of the chemical, general and pharmaceutical industries.

Technical data:	DN	25–250	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	1160 max.	
	H [m]	162 max.	
	p [bar]	25 max.	
	T [°C]	+400 max.	



Magnochem Standardised chemical pump with magnetic drive

Automation option: PumpDrive

Description: Horizontal, seal-less volute casing pump in back pull-out design, with magnetic drive, to ISO 2858 / EN 22 858 / ISO 5199, with radial impeller, single-stage, single-entry. ATEX-compliant version available. Pump can be supplied with FDA-approved seals/elastomers.

Application: Handling liquids in diverse processes of the chemical, general and pharmaceutical industries.

Technical data:	DN	25–250	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	1250 max.	
	H [m]	153 max.	
	p [bar]	25 max.	
	T [°C]	+300 max.	



Secochem Ex Explosion-proof standardised chemical pump with canned motor

Description: Horizontal seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry, casing connecting dimensions to EN 22 858 / ISO 2858. ATEX-compliant. Pump can be supplied with FDA-approved seals/elastomers.

Application: Handling liquids in diverse processes of the chemical, general and pharmaceutical industries.

Technical data:	DN	25–100	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	300 max.	
	H [m]	150 max.	
	p [bar]	25 max.	
	T [°C]	+130 max.	





Pumps for active ingredient processes

HN (Nikkiso-KSB) Explosion-proof chemical pump with canned motor



Description: Horizontal seal-less single-stage pump with fully enclosed canned motor, uncooled, coolable or heatable; Nikkiso E-Monitor for condition monitoring (explosion-proof). ATEX-compliant. Shown: all-stainless steel variant for clean room environments.

Application: For handling aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and pharmaceutical industries.

Technical data:	DN	32–300
	Q [m ³ /h]	800 max.
	H [m]	200 max.
	p [bar]	40 max.
	T [°C]	-100 to +400 max.

These data refer to 50 Hz operation.
Pump also available for 60 Hz.

KWP Centrifugal pump with channel impeller

Automation option: PumpDrive



Description: Horizontal, radially split volute casing pump in back pull-out or close-coupled design, single-stage, single-entry, available with various impeller types: channel impeller, open multi-vane impeller and free-flow impeller. ATEX-compliant version available.

Application: Handling solids-laden liquids in the chemical, general and pharmaceutical industries.

Technical data:	DN	40–800
	Q [m ³ /h]	1300 max.
	H [m]	100 max.
	p [bar]	10 max.
	T [°C]	+280 max.
	n [rpm]	2900 max.

These data refer to 50 Hz operation.
Pump also available for 60 Hz.



Microchem Centrifugal pump for minimal volume flows

Factory-automated

Description: System consisting of a variable-speed, single-stage centrifugal pump with directly flanged motor and integrated control unit.

Application: Continuous volume flow control of aggressive organic and inorganic fluids in the chemical and pharmaceutical industry. The pump is suitable for use in laboratories, pilot plants and in production, particularly in industrial process engineering, continuous processes, micro-process engineering, mini-plants, dosing, coating, spray-drying and injection applications.

Technical data:	Q [ml/min]	0–5000
	H [m]	200 max.
	p [bar]	25 max.
	T [°C]	-10 to +100

These data refer to 50 Hz operation.
Pump also available for 60 Hz.



Vitastage Investment cast multistage centrifugal pump

Description: Multistage centrifugal pump in close-coupled design for vertical or horizontal installation. All wetted components made of DIN 1.4401/1.4408 (AISI 316/CF8M) stainless steel. Versatile and robust.

Application: Basic transport duties.

Technical data:	Q [m ³ /h]	40 max.
	H [m]	150 max.
	p [bar]	16 max.
	T [°C]	+140 max.

These data refer to 50 Hz operation.
Pump also available for 60 Hz.

NEW



Pumps for peripheral processes.

Our powerful product portfolio for peripheral processes is well-established in the pharmaceutical industry thanks to perfectly matched solutions and continuous product development.

Multitec High-pressure ring-section pump



Description: Multistage horizontal or vertical centrifugal pump in ring-section design, long-coupled and close-coupled versions, with axial or radial suction nozzle, cast radial impellers. ATEX-compliant version available.

Application: Water and drinking water supply systems, industry, pressure booster systems, irrigation systems, in power stations, heating, filter, fire-fighting, reverse osmosis and washing plants, snow guns etc.

Technical data:	DN	32–150
	Q [m ³ /h]	850 max.
	H [m]	630 (800) max.
	p [bar]	63 (80) max.
	T [°C]	-10 to +200
	n [rpm]	4000 max.

These data refer to 50 Hz operation.
Pump also available for 60 Hz.

Etanorm / Etabloc / Etachrom Standardised pump

Automation option: PumpDrive



Description: Horizontal, long-coupled, single-stage volute casing pump (pump sizes > 125 with two stages) in back pull-out design. Replaceable shaft sleeves / shaft protecting sleeves and casing wear rings. ATEX-compliant version available.

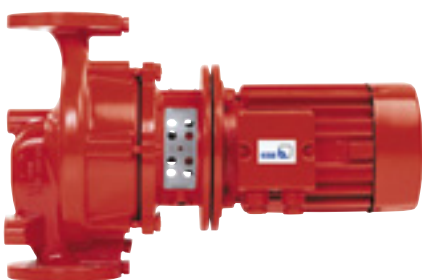
Application: In bottle rinsing systems, spray irrigation, general irrigation, drainage, water supply, heating and air-conditioning systems, condensate transport, swimming pools, fire-fighting systems, handling hot water, cooling water, fire-fighting water, oil, brine, drinking water, brackish water, service water, etc.

Technical data:

	Etanorm	Etabloc	Etachrom
DN	32–300	DN 25–150	DN 25–80
Q [m ³ /h]	1900 max.	Q [m ³ /h] 800 max.	Q [m ³ /h] 260 max.
H [m]	102 max.	H [m] 102 max.	H [m] 106 max.
p [bar]	16 max.	p [bar] 16 max.	p [bar] 12 max.
T [°C]	+140 max.	T [°C] +110 max.	T [°C] +110 max.
		n [rpm] 4200 max.	

Etaline In-line pump

Automation option: PumpDrive



Description: Close-coupled in-line heating pump with volute casing and standardised motor.

Application: Water supply, cooling circuits, air-conditioning systems, hot water heating systems, service water supply systems and industrial recirculation systems.

Technical data:	DN	32–200
	Q [m ³ /h]	700 max.
	H [m]	95 max.
	p [bar]	16 max.
	T [°C]	-30 to +140

These data refer to 50 Hz operation.
Pump also available for 60 Hz.

Movitec High-pressure in-line pump

Automation option: PumpDrive

Description: Multistage, vertical, high-pressure centrifugal pump in ring-section design with suction and discharge nozzles of identical nominal diameters arranged opposite to each other (in-line design), close-coupled. Various seal and line connection options.

Application: In water treatment, fire-fighting and pressure booster systems, hot water and cooling water circulation, etc.

Technical data:	DN	25–100	p [bar]	40 max.	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	102 max.	T [°C]	+140 max.	
	H [m]	401 max.	n [rpm]	2900 max.	



Etaseco / Etaseco-I Standardised water pump with canned motor

Description: Horizontal / vertical, seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry, casing connecting dimensions to EN 733.

Application: For handling aggressive, flammable, toxic, volatile, or valuable liquids in the chemical and petrochemical industries, in environmental and industrial engineering.

Technical data:	DN	32–100	p [bar]	16 max.	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	250 max.	T [°C]	+140 max.	
	H [m]	100 max.			



Amarex KRT Submersible motor pump

Automation option: PumpDrive

Description: Vertical single-stage submersible motor pump in close-coupled design, various impeller types, for wet or dry installation, stationary and transportable version. ATEX-compliant version available.

Application: Handling all types of abrasive or aggressive waste water in water and waste water engineering and in industry, especially untreated waste water containing long fibres and solid substances, fluids containing gas/air as well as raw, activated and digested sludge.

Technical data:	DN	40–700	T [°C]	+60 max.	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	10800 max.	n [rpm]	2900 max.	
	H [m]	100 max.			



MK / MKY Waste water, condensate and heat transfer liquid pump

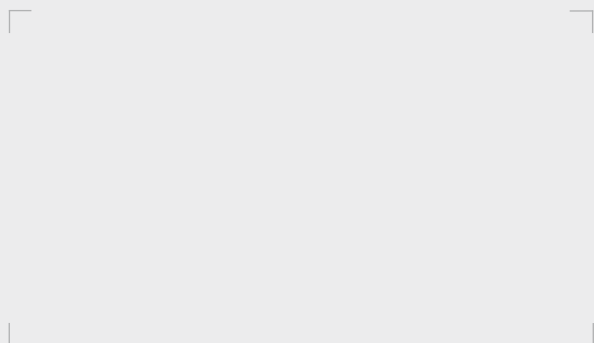
Description: Vertical submersible pump with three-channel impeller, volute casing designed as inlet strainer.

Application: Pumping condensate and heat transfer liquids below boiling point, condensate return systems, primary and secondary heating circuits, direct installation in heating tanks or heat exchangers in the secondary circuits of heat transfer systems (MKY).

Technical data:	Rp/DN	2 / 50	p [bar]	16 max.	These data refer to 50 Hz operation. Pump also available for 60 Hz.
	Q [m ³ /h]	36 max.	T [°C]	+200 max.	
	H [m]	19 max.			



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More space for solutions.



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