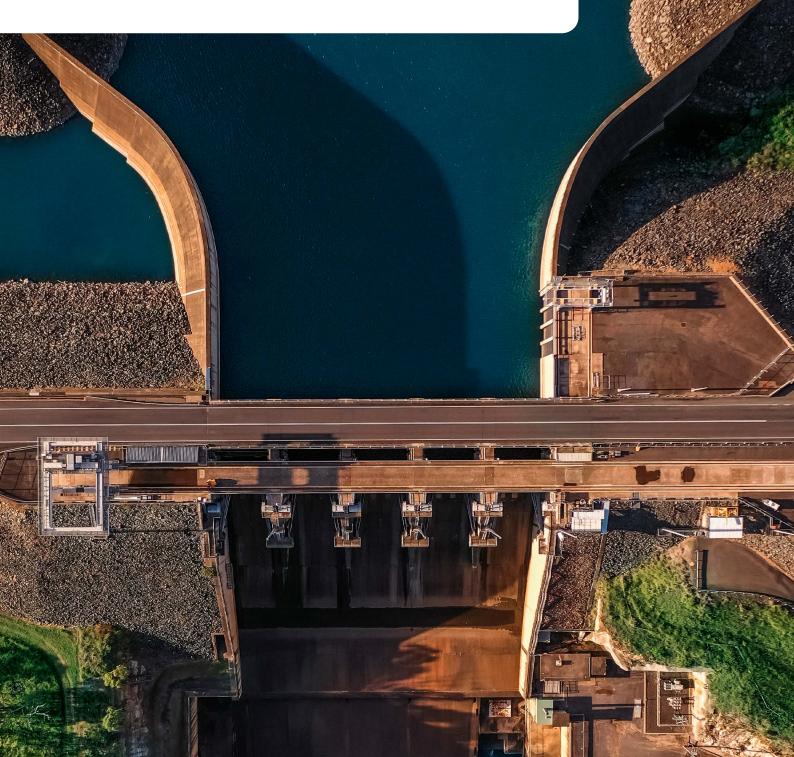


### **Product Portfolio**

Australian Water & Wastewater Applications



# WASTEWATER APPLICATIONS

Wherever people live or work, wastewater is produced, and reliable systems must be in place to ensure it is removed and cleaned. Only then can it be returned to the natural water cycle.

## KSB submersible pumps: Highest efficiency and non-clogging operation

As one of the leading submersible pump manufacturers worldwide KSB is always there for you as a reliable partner, making sure to offer you the best possible energy efficiency and reliability.

#### **Submersible Motor Pumps**

Amarex	Description: Vertical single-st wet installation, open dual-vane i transportable ve close-coupled pu ing. ATEX-compl	with vortex impo mpeller (D-max) rsion. Single-stag mp sets which a	eller (F-max) or , stationary or ge, single-entry re not self-prim-	Technical Data is for 5 Also availab DN Q m <sup>3</sup> /h H m	) Hz operation.
Scan to Learn More	Applications: Wastewater tran plants, sludge tre management, ste systems and recip Impellers F-Max, D-Max	eatment, wastew ormwater transp	ater	Τ°C	up to 40°C
Amarex KRT Scan to Learn More	motor pump in c various next-gen or dry installatio version, with ene for use in potent <b>Applications:</b> Wastewater mar disposal, service wastewater treat	Horizontal or vertical single-stage submersible motor pump in close-coupled design, with various next-generation impeller types, for wet or dry installation, stationary or transportable version, with energy-saving motor and models for use in potentially explosive atmospheres. <b>Applications:</b> Wastewater management, disposal, sludge disposal, service water supply systems and wastewater treatment plants.			Data: D Hz operation. e for 60 Hz. up to 700 up to 10,080 up to 120 up to 60°C
Amarex NS	for wet installati or transportable are floodable, sin coupled pump se ATEX-compliant <b>Applications:</b> Wastewater mar wastewater trea and drainage of	Vertical single-stage submersible motor pump for wet installation, with cutter (S), stationary or transportable version. Amarex N pumps are floodable, single-stage, single-entry close- coupled pump sets which are not self-priming. ATEX-compliant version available. <b>Applications:</b> Wastewater management, sludge disposal, wastewater treatment plants, drainage systems and drainage of rooms and areas at risk of flooding on municipal, commercial and industrial premises. <b>Impellers</b>			Data: D Hz operation. e for 60 Hz. 50 up to 22 up to 49 up to 40°C
Pumps Factory- Automation	Water Transport and	Industry	Energy	Building	Solids Transport

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Amarex		•	٠	٠		٠	
Amarex KRT		•	٠	٠		•	
Amarex NS		•	٠	٠		٠	

4

### **Pump impellers: Type defines function**

The impeller is the pump component which actually imparts energy to the fluid handled, making it the "heart" of the pump. However, the wastewater's composition varies greatly. It may contain solids, wet wipes, sludge or faeces as well as stringy materials or substances forming foam.

To achieve the best pumping results, the impeller should be ideally suited to the individual application. The aim is always to prevent clogging and to ensure a long service life and energy-efficient operation.

#### Free-flow impeller

Centrifugal pumps with a free-flow impeller are preferably used for wastewater containing solid substances and long fibres, coarse solids as well as entrapped gas or air.

This is why they are a good match for wastewater with a large gas and sand content. The dry matter content (i.e. the solids content; DS content) should not exceed 7%; the impeller's optimum, i.e. its highest efficiency is 59%.

#### Single-vane impeller

The single-vane impeller, in closed design, is used for raw wastewater containing solid substances and stringy fibres as well as for recirculated and heating sludge and combined sewage.

It is also suitable for handling raw, activated and digested sludge. The maximum dry solids content can be up to 6%. The best efficiency is 81%.

#### Diagonal single-vane impeller

The diagonal single-vane impeller – another open impeller design – serves to handle fluids containing solid substances and long fibres, coarse solids as well as entrapped gas or air. It is made to handle raw wastewater, combined sewage, recirculated and heating sludge as well as activated, raw and digested sludge with a solids content of up to 13% as well as high-viscosity fluids.

The best efficiency is 81%. Its free passage is large but slightly smaller than that of a free-flow impeller.

#### Radial multi-vane impeller

The radial multi-vane impeller – another open impeller design – serves to handle fluids containing solid substances and long fibres, coarse solids as well as entrapped gas or air. It is specially suited to handling raw wastewater, combined sewage, recirculated and heating sludge as well as activated, raw and digested sludge with a solids content of up to 6% as well as high-viscosity fluids.

The Amarex achieves 78% efficiency and the Amarex KRT achieves 85 % efficiency. The free passage is up to 76 mm and thus meets local requirements.



Type F/F-Max



Type E/E-Max



Type D



Type D-Max

#### Multi-channel impeller

Opting for a multi-channel impeller makes sense when contaminated, solids-laden, muddy non-gaseous fluids which do not contain fibrous, stringy material are to be transported.

This impeller type is also suitable for pre-screened wastewater, mechanically treated wastewater, industrial effluent, landfill wastewater as well as stormwater and activated sludge. The maximum dry solids content is 5%. The best efficiency is 90%.

Depending on the size, impellers with free passages larger than 190mm are also available. The multi-channel impeller has the highest efficiency of the five impeller types featured. It is primarily used for wastewater with a low contamination load or for pre-treated wastewater.

#### Cutter

Centrifugal pumps with a cutter are designed to handle wastewater containing coarse substances, and/or long fibres when the discharge line diameter is relatively small (DN 40 and DN 50). The best efficiency is 42%. The maximum free passage is 7mm.

#### The right impeller for every type of wastewater

	Impeller Type	Fluid Handled	Free Passage	Best Efficiency	Gas Content [vol%]	Sand Content [g/l]	Dry Matter Content
F-Max	Free-flow impeller (vortex impeller)	<ul> <li>Raw wastewater</li> <li>Activated sludge</li> <li>Raw and digested sludge</li> <li>Combined sewage</li> </ul>	•••	•	•••	•••	••
E-Max	Single-vane impeller	<ul> <li>Raw wastewater</li> <li>Activated sludge</li> <li>Raw and digested sludge</li> <li>Combined sewage</li> <li>Recirculated and heating</li> </ul>	••	••	•	••	••
D	Open diagonal single-vane impeller	<ul> <li>Raw wastewater</li> <li>Activated sludge</li> <li>Raw and digested sludge</li> <li>Combined sewage</li> <li>Recirculated and heating</li> </ul>	••	••	••	••	•••
D-Max	Open radial multi-vane impeller	<ul> <li>Activated sludge</li> <li>Pre-screened wastewater</li> <li>Mechanically treated wastewater</li> <li>Industrial wastewater</li> <li>Landfill wastewater</li> <li>Stormwater</li> </ul>	••	•••	••	••	••
K-Max	Multi-channel impeller	<ul> <li>Activated sludge</li> <li>Pre-screened wastewater</li> <li>Mechanically treated wastewater</li> <li>Industrial wastewater</li> <li>Landfill wastewater</li> <li>Stormwater</li> </ul>	••	•••	•	•••	•
S	Cutter	<ul> <li>Domestic wastewater</li> <li>Wastewater</li> <li>Faeces</li> </ul>	•	•	••	•	•



Type K/K-Max

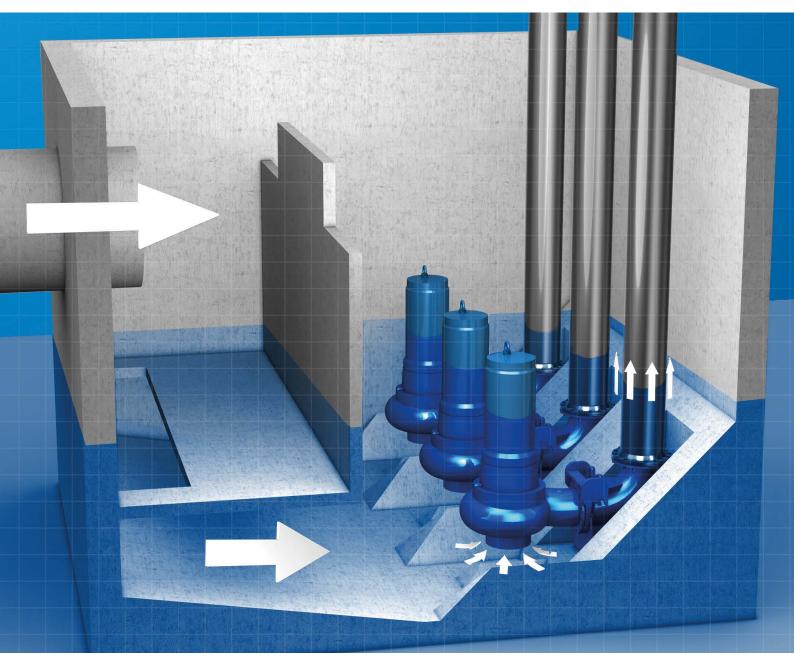


### **Amarex KRT Installation**

Amarex has been specially developed to adapt to all environmental conditions. It can be integrated into all new or existing plants, both mechanically and electrically.

As the pump is easy to handle, it can be installed quickly and used to replace older pumps with far lower efficiencies. Increased efficiency, achieved easily and fast.





#### Submersible Pumps in Discharge Tubes

Amacan P

Scan to Learn More



#### **Description:**

Wet-installed submersible motor pump for installation in discharge tubes, with axial propeller in ECB design, single-stage, single-entry. ATEX-compliant version available.

Applications: Irrigation and drainage pumping stations, for stormwater transport in stormwater pumping stations, raw and clean water transport in water and wastewater treatment plants, cooling water transport in power stations and industrial plants, industrial water supply, water pollution control and flood control and aquaculture.

#### **Technical Data:**

Data is for 50 Hz operation. Also available for 60 Hz.			
DN	up to 1,600		
Q m³/h	up to 25,200		
Hm	up to 12		
Т°С	up to 40°C		
n rpm	up to 1,450		

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Amacan P		•	٠	٠			

**Mixers / Agitators / Tank Cleaning Units** 

## Future-ready pumping stations: expert planning meets powerful mixers

When pumping stations and wastewater treatment plants have to handle heavy pollutant loads, from heavy rain to increased effluents or fibers, submersible mixers are a smart solution.

Amamix Scan to Learn More	Description: Horizontal submersible mixer with self-cleaning ECB propeller, close-coupled design, direct drive. ATEX-compliant version available. Applications: Handling municipal and industrial wastewater and sludges as well as applications in environmental engineering.	<b>Technical Data:</b> Propeller Ø [mm] T °C Installation Depth [mm]	200 - 600 up to 40°C up to 30
Amaprop Scan to Learn More	Description: Horizontal submersible mixer with self-cleaning ECB propeller, close-coupled design, with coaxial spur gear drive. Explosion-proof version available. Applications: In environmental engineering, particularly in municipal and industrial wastewater and sludge treatment, for circulating, keeping in suspension and inducing flow in nitrification tanks and denitrification tanks, activated sludge tanks, biological phosphate elimination tanks, flocculation tanks and sludge storage tanks.	<b>Technical Data:</b> Propeller Ø [mm] - 2,500 T °C Installation Depth [mm]	1,000 up to 40°C up to 12
Amaline	<b>Description</b> Wet-installed horizontal propeller pump with submersible motor, equipped with direct drive or spur gear, ECB propeller with rigid, fibre-repellent blades, bolt-free connection to the discharge pipe. Explosion-proof version available. <b>Applications:</b> Recirculating activated sludge in wastewater treatment systems.	Technical Data: DN Q m³/h H m T ℃ n rpm	200 - 800 up to 6,700 up to 3,5 up to 40°C up to 1,450

#### Water Transport Factory-Automation Building Solids Energy Pumps and Industry Conversion Automated Available Services Transport Water Treatment Amarex Amarex KRT Amarex NS

#### **Pump for Solids-Laden Fluids**

#### Sewatec



#### Description:

Volute casing pump for horizontal or vertical installation, with various next-generation impeller types, discharge flange to DIN and ANSI standards. Explosion-proof version available.

#### **Applications:**

**Description:** 

version available.

**Applications:** 

Wastewater transport, wastewater disposal, wastewater management, transport of contaminated surface water and sludge processing.

Close-coupled volute casing pump for horizontal or vertical installation, with various

nextgeneration impeller types, discharge flange

to DIN and ANSI standards. Explosion-proof

Waste water transport, waste water disposal,

contaminated surface water, sludge treatment.

waste water management, transport of

#### Technical Data:

**Technical Data:** 

DN

Ηm

p bar

n rpm

Т°С

Q m³/h

Data is for 50 Hz operation. Also available for 60 Hz.

50 - 200

up to 90

up to 10

up to 70°C

up to 2,900

up to 1,000

Data is for 50 Hz operation. Also available for 60 Hz.			
DN	50 - 700		
Q m³/h	up to 10,000		
Hm	up to 115		
p bar	up to 10		
Т°С	up to 70°C		
n rpm	up to 2,900		

Learn More

Scan to



Sewabloc



Scan to Learn More



#### Drainag

Drainage Pump / Wastewater Pump					
Description: Vertical single-stage fully floodable submersible waste water pump in close-coupled design (grey cast iron variant), non-explosion-proof, stationary or transportable version. Applications: Handling grey water, especially wastewater containing long fibres and solid substances, liquids containing gas/air, removing wastewater from flooded rooms and surfaces.					

Technical Data:

Data is for 50 Hz operation.

DN	50 - 80
Q m³/h	up to 127
Hm	up to 36.9
Т°С	up to 40°C

Scan to Learn More



Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Sewatec		٠	٠	٠			
Sewabloc		٠	٠	٠			
Ama-Porter F/S		•				٠	

# WATER APPLICATIONS

The set is a set

A AR

Reliable pumps and valves, innovative technology, comprehensive service: KSB is an expert in reliable and efficient water extraction, water treatment and water distribution.

IIIII

### KSB Eta: Keeps the world on the move

Eta is known for its excellent efficiencies. It also stands for high quality, enormous versatility and absolute reliability. This is why it has been chosen to ensure reliable processes in many applications.

#### Standardised / Close-Coupled Pumps In-line Pumps

Etanorm Description: Technical Data: Horizontal volute casing pump, single-stage, Data is for 50 Hz operation. with ratings and main dimensions to EN Also available for 60 Hz. 733, longcoupled, back pull-out design, with DN 25 - 150 replaceable shaft sleeves / shaft protecting Q m³/h up to 1,930 sleeves and casing wear rings, with motorup to 160 mounted variable speed system. Coupled with Ηm WEG W22 IP66 IE3 Three phase induction motor. up to 16 p bar KSB SuPremE Motors, a magentless synchrounour -30°C - +140°C Т°С reluctance motor (exception: motor sizes 0.55 kW/ 0.75 kW with 4 poles are designed with permanent magnets) of IE4/IE5 Efficiency **Material Options:** Class available upon request. Motor mounting Casing Cast Iron (G) 1. points in accordance with EN 50347, envelope Stainless Steel 316 (C) dimensions in accordance with DIN V 42673 (07-Impellers Cast Iron (G) 2011). ATEX-compliant version available. 2. Stainless Steel 316 (C) **Applications:** Bronze (B) Pumping clean or aggressive liquids not chemically or mechanically aggressive to the pump materials in water supply systems, cooling Scan to Learn More circuits, swimming pools, fire-fighting systems, irrigation systems, drainage systems, heating systems, air-conditioning systems and spray irrigation systems. Etanorm SYT **Description:** Technical Data: Horizontal volute casing pump in back pull-out Data is for 50 Hz operation. design, single-stage, with ratings and dimensions Also available for 60 Hz. to EN 733, radially split volute casing with DN 32 - 100 integrally cast pump feet, replaceable casing Q m³/h up to 316 wear rings, closed radial impeller with multiply curved vanes, single mechanical seal to EN 12756, Ηm up to 69 double mechanical seal to EN 12756, drive-end p bar up to 16 bearings: rolling element bearings, pump-end Т°С -30°C - +350°C bearings: plain bearings, with magnetless KSB SuPremE motor (exception: motor sizes 0.55 kW / 0.75 kW with 1500 rpm are designed with permanent magnets) of efficiency class IE4/IE5 and PumpDrive variable speed system; ATEXcompliant version available Applications: Heat transfer systems, hot water recirculation Scan to Learn More

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Etanorm	•	•	•	•	•	٠	
Etanorm SYT	•	•		•		٠	
Etabloc	•	•	•	•	٠	٠	
Etaline	•	•		•		٠	

#### 12

#### **In-Line Pumps**

#### Etabloc



Scan to Learn More



Etaline

Scan to Learn More



#### Description:

Single-stage close-coupled volute casing pump, with ratings to EN 733, with replaceable shaft sleeve and casing wear rings, with motormounted variable speed system. Coupled with WEG W22 IP66 IE3 Three phase induction motor. KSB SuPremE Motors, a magentless synchrounour reluctance motor (exception: motor sizes 0.55 kW/ 0.75 kW with 4 poles are designed with permanent magnets) of IE4/IE5 Efficiency Class available upon request. Motor mounting points in accordance with EN 50347, envelope dimensions in accordance with DIN V 42673 (07-2011). ATEX-compliant version available.

#### Applications:

Pumping clean or aggressive liquids not chemically or mechanically aggressive to the pump materials in water supply systems, cooling circuits, swimming pools, fire-fighting systems, irrigation systems, drainage systems, heating systems, air-conditioning systems and spray irrigation systems.

#### **Description:**

Single-stage volute casing pump in in-line design, with magnetless KSB SuPremE motor of fficiency class IE4/IE5 and PumpDrive variable speed system; pump shaft and motor shaft are rigidly connected. Coupled with WEG W22 IP66 IE3 Three phase induction motor. KSB SuPremE Motors, a magentless synchrounour reluctance motor (exception: motor sizes 0.55 kW/ 0.75 kW with 4 poles are designed with permanent magnets) of IE4/IE5 Efficiency Class available upon request. Motor mounting points in accordance with EN 50347, envelope dimensions in accordance with DIN V 42673 (07-2011). ATEXcompliant version available.

#### Application:

Hot water heating, cooling circuits, airconditioning, water supply systems, service water supply systems and industrial recirculation systems.

#### **Technical Data:**

 Data is for 50 Hz operation.

 Also available for 60 Hz.

 DN
 25 - 150

 Q m³/h
 up to 660

 H m
 up to 160

 p bar
 up to 16

 T °C
 -30°C - +140°C

#### **Material Options:**

- 1. Casing Cast Iron (G) Stainless Steel 316 (C)
- Impellers Cast Iron (G) Stainless Steel 316 (C) Bronze (B)

#### Technical Data:

Data is for 50 Hz operation.				
Also available for 60 Hz.				
DN	up to 32 - 200			
Q m³/h	up to 700			
Hm	up to 96			
p bar	up to 16			
Т°С	-30°C - +140°C			

#### **Material Options:**

- 1. Casing Cast Iron (G) Stainless Steel 316 (C)
- 2. Impellers Cast Iron (G) Stainless Steel 316 (C) Bronze (B)



## KSB high-pressure pumps: Top performance through technical innovation

Thanks to many years of tradition and innovation, KSB offers high-pressure pumps with the highest quality, optimum performance and continuous further development.

#### **High-Pressure Pumps**

#### MegaCPK



Scan to Learn More



Movitec



Scan to Learn More



#### **Description:**

Horizontal radially split volute casing pump in back pull-out design, with radial impeller, singleentry,single-stage, to DIN EN ISO 2858 / ISO 5199, in a large range of material and seal variants; also available as a variant with "wet" shaft and conical seal chamber. Coupled with WEG W22 IP66 IE3 Three phase induction motor. KSB SuPremE Motors, a magentless synchrounour reluctance motor (exception: motor sizes 0.55 kW/ 0.75 kW with 4 poles are designed with permanent magnets) of IE4/IE5 Efficiency Class available upon request. Motor mounting points in accordance with EN 50347, envelope dimensions in accordance with DIN V 42673 (07-2011). ATEX-compliant version available.

#### **Applications:**

Pumping aggressive, toxic, explosive, valuable, flammable, malodorous or harmful liquids in the chemical and petrochemical industries, in refineries, power stations and desalination plants as well as in the food industry and general industry.

#### Technical Data:

Data is for 50 Hz operation.					
Also available for 60 Hz.					
DN	25 - 250				
Q m³/h	up to 3,300				
Hm	up to 162				
p bar	up to 25				
Т°С	-10°C - +400°C				

#### **Material Options:**

- 1. Casing Cast Iron (G) Stainless Steel 316 (C) Carbon Steel (E)
- 2. Impellers Cast Iron (G) Stainless Steel 316 (C) Bronze (B) Carbon Steel (E)

#### 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. Coupled with WEG W22 IP66 IE3 Three phase induction motor. KSB SuPremE Motors, a magentless synchrounour reluctance motor (exception: motor sizes 0.55 kW/ 0.75 kW with 4 poles are designed with permanent magnets) of IE4/IE5 Efficiency Class available upon request. Motor mounting points in accordance with DIN V 42673 (07-2011). ATEXcompliant version available.

#### Applications:

Spray irrigation, general irrigation, washing, water treatment, fire-fighting and pressure booster systems, hot water and cooling water recirculation and boiler feed systems.

#### Data is for 50 Hz operation. Also available for 60 Hz. RP 1 - 2 DN up to 25 - 125

Technical Data:

Q m³/h	up to 160
Hm	up to 401
p bar	up to 40
Т°С	-20°C - +40°C
n rpm	up to 2,900

#### **Available Options:**

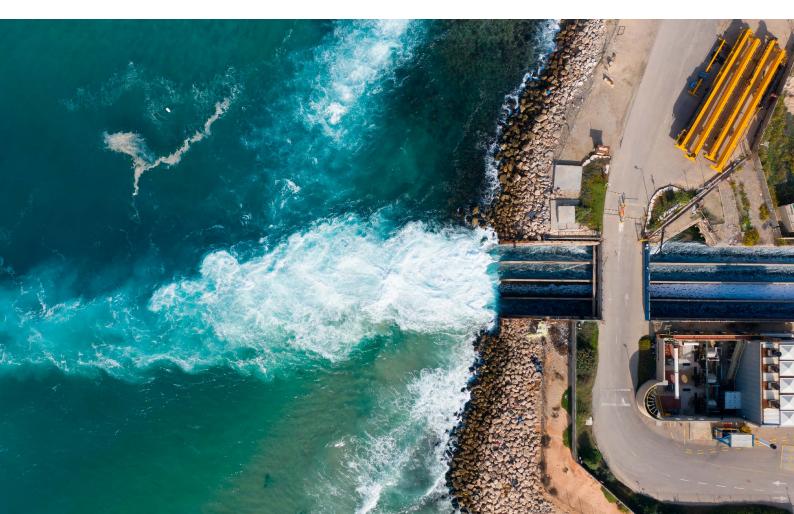
- 1. Flanged Connection (ASME/DIN)
- 2. Oval Flanged with Internal Screwed Connection
- 3. Material Options Stainless Steel 304 Stainless Steel 316

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
MegaCPK	٠	•		٠	٠		
Movitec		•	٠	۲	٠	•	

#### **High-Pressure Pumps**

Movitec VCI	<b>Description:</b> Multistage vertical high-pressure immersion pump for installation on tanks or platforms.		<b>l Data:</b> 50 Hz operation. ble for 60 Hz.
Scan to Learn More	<b>Applications:</b> Machine tools, industrial machine systems, condensate transport and paint shops.	RP Q m³/h H m p bar T ℃ n rpm	1 1/4 - 2 up to 22,5 up to 249 up to 25 -10°C - +120°C up to 2,900
Multitec Scan to Learn More	Description Multistage horizontal or vertical centrifugal pump in ring-section design, long-coupled or closecoupled, with axial or radial suction nozzle, cast radial impellers and motor-mounted variable speed system. ATEX-compliant version available. Applications: Water supply, drinking water supply, industry, pressure boosting, irrigation, power stations, heating systems, filtering systems, fire-fighting systems, reverse osmosis systems, snow-making systems and washing plants, and geothermal systems (re-injection of geothermal water into the aquifer).	Technica DN Q m³/h H m p bar T ℃ n rpm	l Data: 32 - 250 up to 1,500 up to 1,000 up to 100 -10°C - +200°C up to 3,500

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Movitec VCI		٠	٠	٠			
Multitec		٠	٠	٠	٠	٠	•



## Water treatment: A complex task bearing great responsibility

Surging global demand for water – especially in industry and households – requires ever more and larger water treatment systems and plants which have to work efficiently. A further challenge is that in future more than 40% of drinking water will have to be produced via seawater desalination.

#### Pumps for desalination by reverse osmosis

Scan to       Image: Constraint of the second	Description Horizontal or vertical multistage centrifugal pump in ring-section design. Axial or radial suction nozzle. Discharge nozzle can be turned in steps of 90°. Closed radial impellers. Made of duplex or super duplex stainless steel. Applications: High-pressure pump for RO seawater desalination systems and geothermal systems (re- injection of geothermal water into the aquifer).	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN $50 - 150$ Q m <sup>3</sup> /hup to 850H mup to 1,000p barup to 100T °C $-10^{\circ}$ C - $+45^{\circ}$ Cn rpmup to 3,500
RPH-RO Scan to Learn More	<b>Description</b> Horizontal radially split volute casing pump for dry installation, made of super-duplex stainless steel. <b>Applications:</b> Booster pump for RO seawater desalination systems.	Technical Data:         DN       100 - 350         Q m³/h       up to 2,500         H m       up to 110         p bar       up to 80         T °C       up to 40°C

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Multitec-RO		•	٠	٠			
RPH-RO			•				



#### Superior technology for down under: The Ravenswood drinking water pump station, Australia

The Ravenswood Pump Station near Perth, Western Australia is part of the Southern Seawater Desalination Plant.

It has the capacity to transfer several million litres of drinking water from the plant and the surrounding reservoirs to Perth's water supply system.

Read full story via www.ksb.com.au



### Get your business flowing with KSB volute casing pumps

For more than 150 years, we have been offering our customers all-in solutions which comprise a broad spectrum of pumps, valves, drive and automation solutions as well as tailored services. A good example of the extraordinary results are our axially split volute casing pumps: Omega, RDLO and RDLP operate reliably and durably in the most diverse of applications.

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 doubleentry 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.

#### **Axially Split Pumps**







#### **Description:**

Single-stage axially split volute casing pump for horizontal or vertical installation, with doubleentry radial impeller, mating flanges to DIN, EN or ASME

#### **Applications:**

Pumping water with a low solids content, e.g. in waterworks, irrigation and drainage pumping stations, extraction duties in desalination systems, power stations, fire-fighting systems, shipbuilding and district heating or cooling.

<b>Technical Data:</b> Data is for 50 Hz operation. Also available for 60 Hz.					
DN	80 - 400				
Q m³/h	up to 4,400				
Hm	up to 210				
p bar	up to 25				
Т°С	up to 140°C				
n rpm	up to 2,900				

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Omega		•	•	•	•	•	
RDLO		•	٠	٠	٠	٠	
RDLP		•	٠				

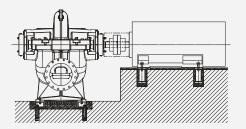
#### Axially split pumps

RDLO Scan to Learn More	Description: Single-stage axially split volute casing pump for horizontal or vertical installation, with doubleentry radial impeller, mating flanges to DIN, EN or ASME. Applications: Pumping water with a low solids content, e.g. in waterworks, irrigation and drainage pumping stations, extraction duties in desalination systems, power stations, fire-fighting systems, shipbuilding and district heating or cooling.	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN350 - 700Q m³/hup to 10,000H mup to 290p barup to 30T °Cup to 140°Cn rpmup to 1,450
RDLP Scan to Learn More	<b>Description:</b> Axially split volute casing pump for horizontal installation, with one, two or three stages and double-entry radial impeller, mating flanges to DIN, ISO or ANSI. <b>Applications:</b> Pumping water with a low solids content, e.g. in waterworks and long-distance water supply.	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN350 - 1,200Q m³/hup to 18,000H mup to 550p barup to 64T °Cup to 80°Cn rpmup to 1,450

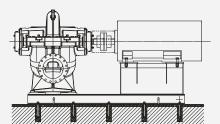
### With KSB, everywhere is pole position

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:

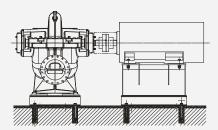
#### Horizontal installation types



Pump and motor on foundation rails



Pump and motor on common baseplate



Pump and motor on separate baseplates

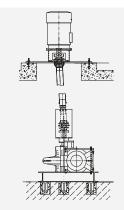
#### Vertical installation types

Pump with motor stool

mounted on top



Pump and motor on separate levels



Pump with motor stool mounted separately



### **KSB B Pump: Vertical turbine pumps**

KSB B Pumps are multistage vertical turbine pumps with a submerged hydraulic system. The pump sets comprise a discharge casing assembly, a column pipe and a pump bowl assembly. In total, 17 sizes with three different impeller types are available.

#### **Vertical Turbine Pump**

Scan to Learn More	-			pump bowls, w n assembly with and lengths of on depths. vater in agriculti ublic water supp	earings and interchangeable column pipes for ure, collection		le for 60 Hz. Higher possible upon request 80 - 500 up to 2,600 up to 160 up to 16 -10°C - + 105°C up to 3,000
Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transpor
B Pump			•	•	•		



## KSB tubular casing pumps. The modular design system for more efficiency.

Tubular casing pumps from KSB are modular in design. This means that we can select the hydraulic system, design, materials, types of installation and control system to exactly meet your requirements. And an optimally designed pump will reduce the life cycle costs of your installation.

#### **Tubular Casing Pumps**

SEZ Scan to Learn More	Veri flov or s disc flan Pun wat sup	scription: tical tubular casing pump with open mixed w impeller, pump intake with inlet nozzle suction elbow, pull-out design available, charge nozzle arranged above- or underfloor, nges to DIN or ANSI standards available. plications: nping raw water, pure water, service ter and cooling water in industry, water uply systems, power stations and seawater alination plants.	50 Hz operation. ble for 60 Hz. bgs possible
SNW Scan to Learn More	Veri imp Resi abo App Irrig stat	scription: tical tubular casing pump with mixed flow beller, single-stage, with maintenance-free idur bearings, discharge nozzle arranged ove- or underfloor. plications: gation and drainage, stormwater pumping tions, for raw water and pure water, water oply and cooling water.	50 Hz operation. ble for 60 Hz. bgs possible
PNW Scan to Learn More	Veri sing bea belo App Irrig stat	scription: tical tubular casing pump with axial propeller, gle-stage, with maintenance-free Residur arings, discharge nozzle arranged above or ow floor level. plications: gation and drainage, stormwater pumping tions, for raw water and pure water, water uply and cooling water.	50 Hz operation. ble for 60 Hz. bgs possible

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Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
SEZ			•	٠	٠		
SNW			•	•	٠		
PNW			٠	•	٠		

## Variants: pull-out or non-pull-out.

KSB's tubular casing pumps can be supplied in two design variants.

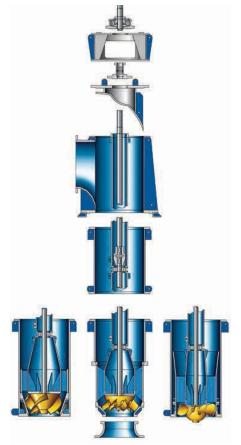
The pull-out design is easier to service and maintain: During dismantling and re-assembly, thae entire rotor can be withdrawn for inspection and maintenance. This minimises downtime for maintenance work and reduces life cycle costs (LCC).

By contrast, the investment for non-pull-out type pumps is considerably lower because a number of components can be dispensed with. This reduces both the weight of the pump and the initial costs.

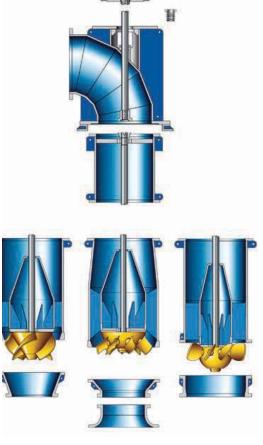
## Hydraulic system: three different impellers to choose from.

We offer three types of impeller designed to meet the specific performance data of your system. The pump will come equipped with the hydraulic system to match your application.

In addition, our casting quality standards are exceptionally high. This enables us to guarantee a high-grade surface finish and a high-precision geometry – prerequisites for a constantly high efficiency.



Pull-out type pump



Non-pull-out type pump



## KSB UPA: Taking reliability to a whole new level

KSB offers you a comprehensive range of reliable submersible borehole pumps and highperformance motors designed to ensure a dependable and cost-effective water supply. We place top priority on making our products reliable and dependable. This is why we continuously optimise our submersible borehole pumps in all stages.



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#### Submersible Borehole Pumps

UPA C 150		<b>Description:</b> All-stainless steel single-stage or multistage centrifugal pump in ring-section design, suitable for vertical or horizontal installation, for well diameters of 150 mm (6 inches) and above.	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN 150O m3/h	
can to earn More		<b>Applications:</b> Spray irrigation systems, general irrigation systems, drawdown of groundwater levels, domestic water supply, fountains, heat pump systems, Data for 50 Hz operation water supply systems	Q m³/h up to 79 H m up to 440 T °C up to 50°C	
PA 200, UPA 250 can to carn More IPA 200) (UPA 250)		Description: Single-stage or multistage single-entry centrifugal pump in ring-section design for vertical or horizontal installation. Optionally available with lift check valve or connection branch. For well diameters of 8 inches and above. Applications: Pumping clean or slightly contaminated water in general water supply, spray irrigation and eneral irrigation, drawdown and maintenance of groundwater levels, fountains and pressure booster systems, mining, fire-fighting systems and emergency water supply.	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN200 - 250Q m³/hup to 330H mup to 460T °Cup to 50°C	
ran to earn More PA 300) (UPA 350)		Description: Single-stage or multistage single-entry centrifugal pump in ring-section design for vertical or horizontal installation. Mixed flow hydraulic systems with trimmable impellers. Optionally available with lift check valve or connection branch. For well diameters of 12 inches and above. Applications: Pumping clean or slightly contaminated water in general water supply, spray irrigation and general irrigation, drawdown and maintenance of groundwater levels, fountains and pressure booster systems, mining, fire-fighting systems and emergency water supply.	Technical Data: Data is for 50 Hz operation. Also available for 60 Hz. DN 300 - 350 Q m³/h up to 840 H m up to 480 T °C up to 50°C	
JPA S 200, UPA S 250		<b>Description:</b> Single-stage or multistage single-entry centrifugal pump in ring-section design for vertical or horizontal installation. Optionally available with lift check valve or connection branch. For well diameters of 8 inches and above. <b>Applications:</b>	Technical Data:Data is for 50 Hz operation.Also available for 60 Hz.DN200 - 250Q m³/hup to 310H mup to 380T °Cup to 50°C	
JPA S 200) (UPA S 250)		For pumping clean or slightly contaminated water in general water supply, spray irrigation and general irrigation, drawdown and maintenance of groundwater levels, fountains and pressure booster systems, mining, fire- fighting systems and emergency water supply.		

Pumps	Factory- Automated	Automation Available	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport
UPA C 150		•	٠	٠		٠	
UPA 200 / 250		•	•	•			
UPA 300 / 350		•	•	•			
UPA S 200 / 250		•	•	٠			

#### **KSB** Australia Locations

#### KSB BUNDAMBA, QLD

#### KSB NETLEY, SA

13 HAWKINS CRESCENT, BUNDAMBA QLD 4300 KSB HOPE VALLEY, WA

13 INVESTIGATOR DRIVE,

HOPE VALLEY WA 6165

#### 4/348 RICHMOND ROAD NETLEY SA 5037

KSB ESSENDON FIELDS, VIC

BELL BUSINESS CENTRE, G18, 72 HARGRAVE AVENUE ESSENDON FIELDS VIC 3041

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