



# **KSB** Group – KSB Sub-Saharan Africa

Germiston / Johannesburg, Republic of South Africa  
Peter Weber & Philip Storch presenting as part of the AfWA webinar 23<sup>th</sup> July 2020





## 84th AfWA' STC SESSIONS AFFILIATE WEBINAR PANEL **Contents**

- 1. KSB Group**
2. The KSB Brand
3. Applications, Products, References
4. KSB in South Africa & Sub-Saharan Africa
5. Digitalisation
6. KSB SupremeServ
7. Research and Development
8. Corporate Social Responsibility



## KSB Group **About Us**

KSB is one of the world's leading manufacturers of pumps and valves, providing a comprehensive range of service offerings.



## KSB Group **Key Figures**

### **Financial year 2019**

Order intake:  
€ 2,453.8 million

Sales revenue:  
€ 2,383.2 million

Earnings before interest and  
taxes (EBIT):  
€ 113.6 million

Employees: 15,645



■ KSB production sites

■ KSB sales and service sites

## KSB Worldwide **Being Global Means Being Closer**

With its 39 production sites in 15 countries, as well as further assembly sites and a tightly knit global sales and service network, KSB staff are active in more than 100 countries.

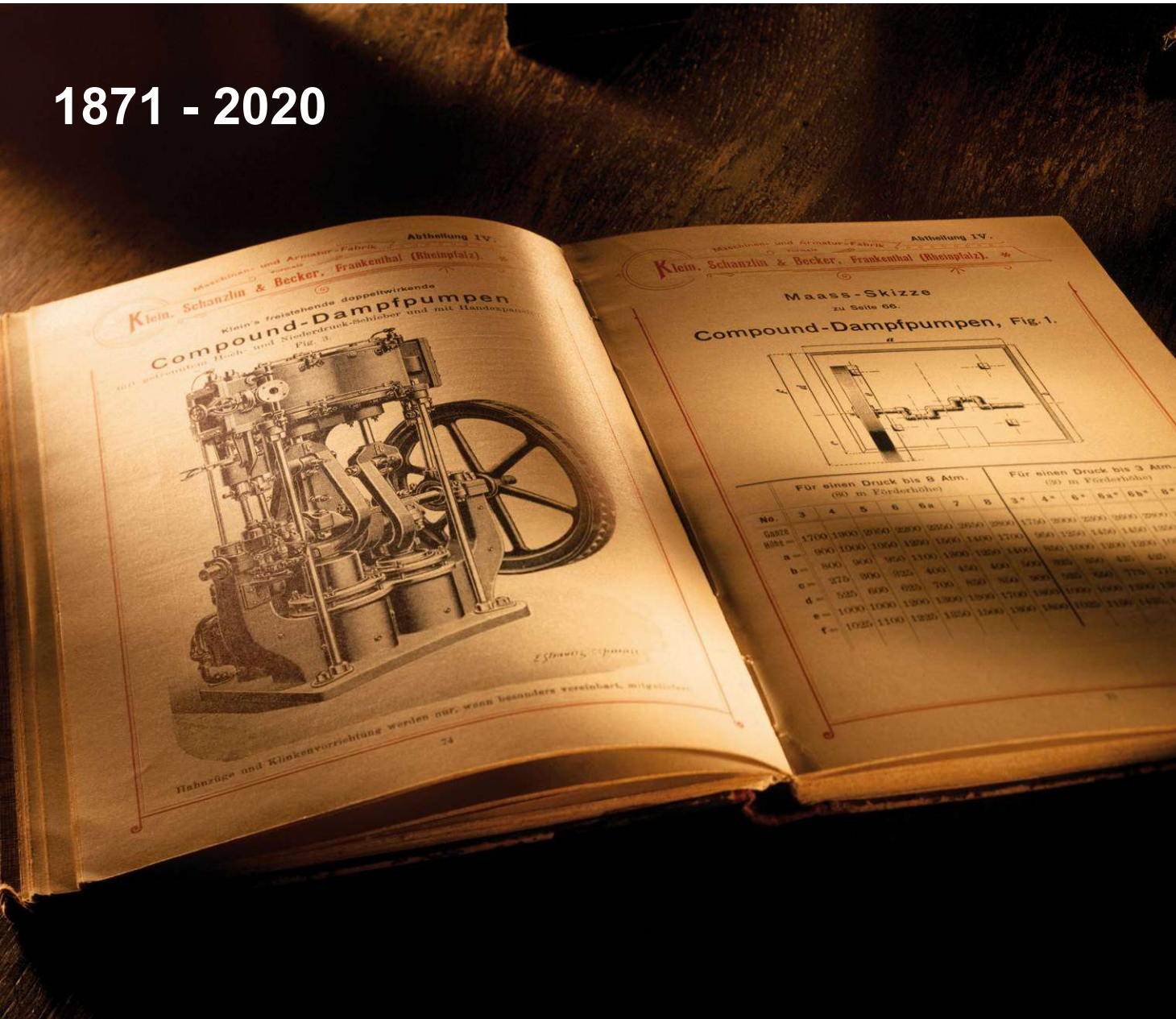


## The KSB Group

# Contents

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1871 - 2020



149 year of innovation

*Technology that is setting the pace*

Founders:

Mr. Johannes Klein

Mr. Friedrich Schanzlin

Mr. Jacob August Becker





The KSB Brand  
**We Make Our Mark...**

The KSB brand stands for technical expertise, excellent quality, and maximum reliability.

Our promise: Technology that drives success.





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Applications  
**Know-how for a  
Variety of  
Applications**

Water transport

Sanitation 1 (Waste water  
treatment)

Sanitation 2 (Building  
services)

Process engineering

Energy conversion

Solids transport



## Waste Water Treatment **Focus on Water Pollution Control**

KSB pumps help in the transport and cleaning of waste water. Sewage treatment processes use dry-installed and wet-installed pumps, as well as mixers and agitators.

Applications:

- Waste water transport
- Waste water treatment
- Rainwater harvesting



## Waste Water Engineering **Waste water product range**

Amarex KRT

Amarex KRT, jacket-cooled

Amacan

Sewatec

Amamix

Amaprop

Amaline



## New generation of sewage pumps



Maximum efficiency (hydraulic + IE3-motor) and a minimum clogging risk for new generation pumps  
**Amarex KRT & Sewatec/Sewabloc**



Waste Water Treatment  
Reference Project

## **Waste Water Pumping Station St. Petersburg, Russia**

Europe's deepest waste water pumping station can count on robust pumps made by KSB.

Twelve submersible motor pumps of the robust and proven Amarex KRT waste water type series are used here. KSB individually tailored their hydraulic systems to the special requirements of the pumping station.



KSB Halle factory

## Latest technology for motor production

- Automatic winding method for motor sizes up to 250 kW
- Fully automated core process...
  - Isolation of slots
  - Winding & insertion of copper windings
  - Forming & bandaging of copper winding heads...on a large-scale winding centre!
- Investment of 3 Mio. €





## Building Services **Expertise at All Levels**

KSB equips industrial and residential buildings, offices as well as exhibition halls and airports with pumps, valves and package units.

Applications:

- Air-conditioning
- Fire protection
- Heating
- Pressure boosting
- Sanitation / Drainage



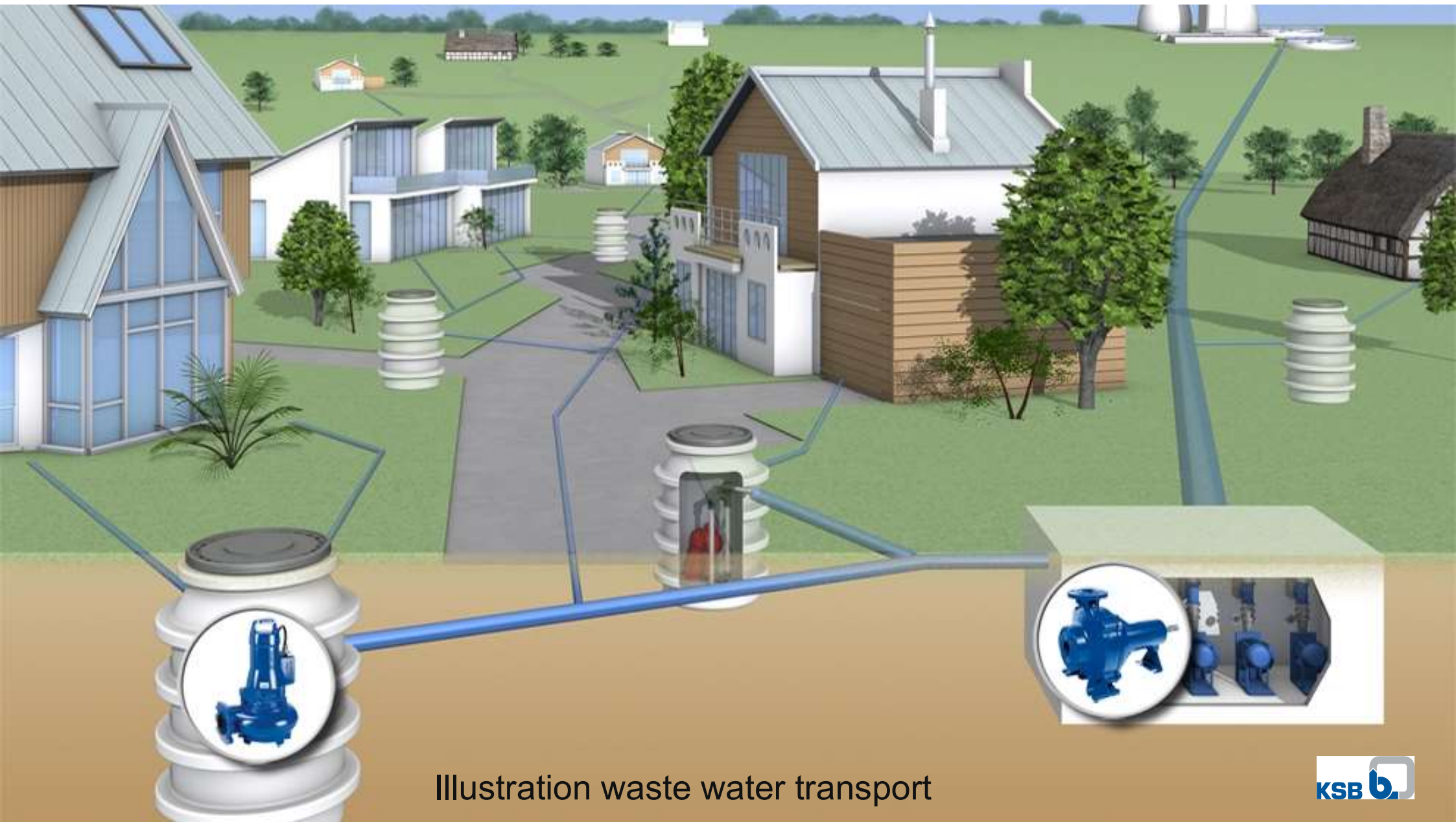
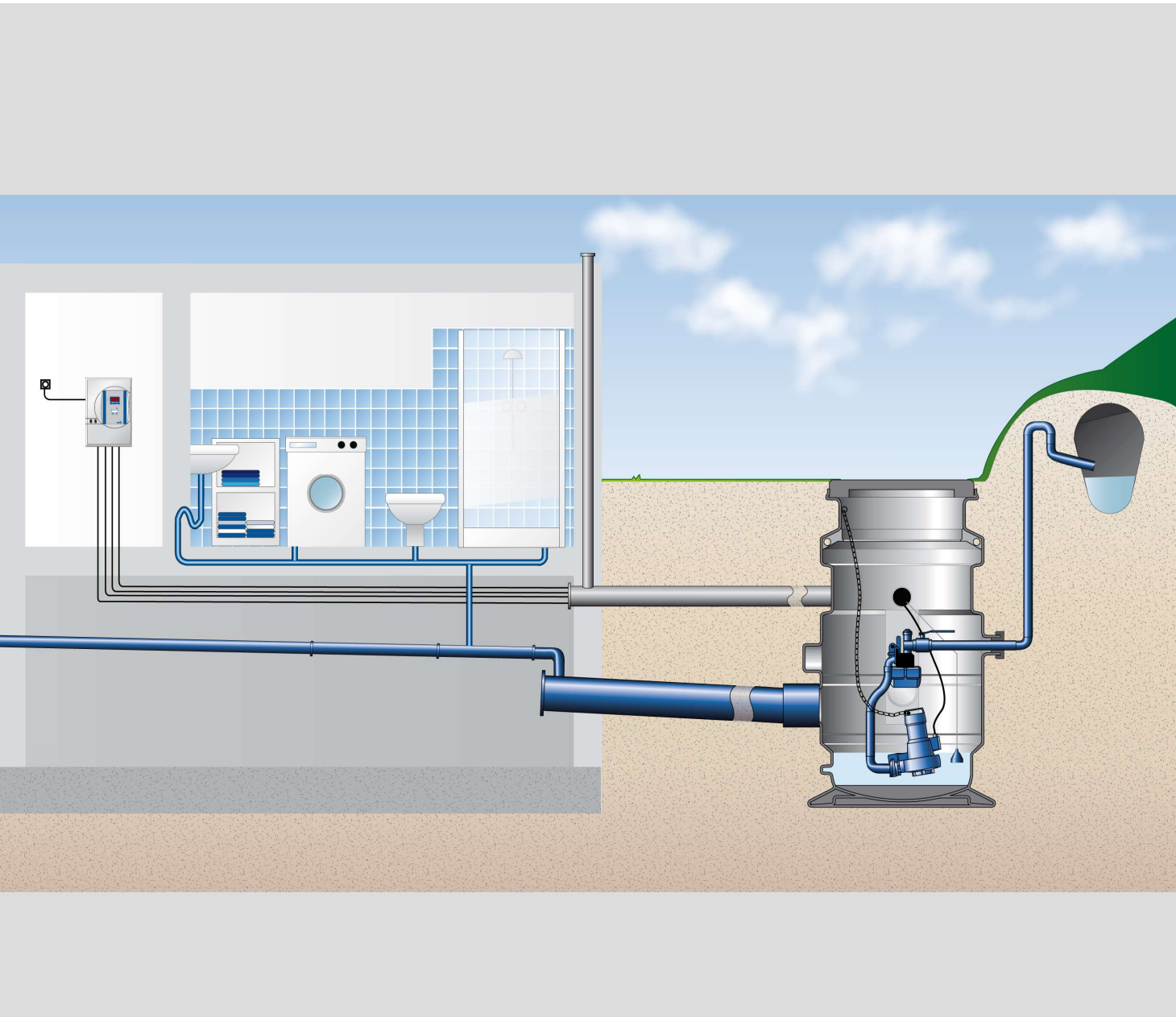


Illustration waste water transport



## Waste water technology

# Pumped drainage

- Domestic and industrial waste water disposal
- The transition from gravity lines installed inside the building to the pumped drainage system takes place in a pump sump, located outside the building.



**Drainage of buildings and premises** with reliable and efficient high quality pumping stations for indoor and outdoor installation

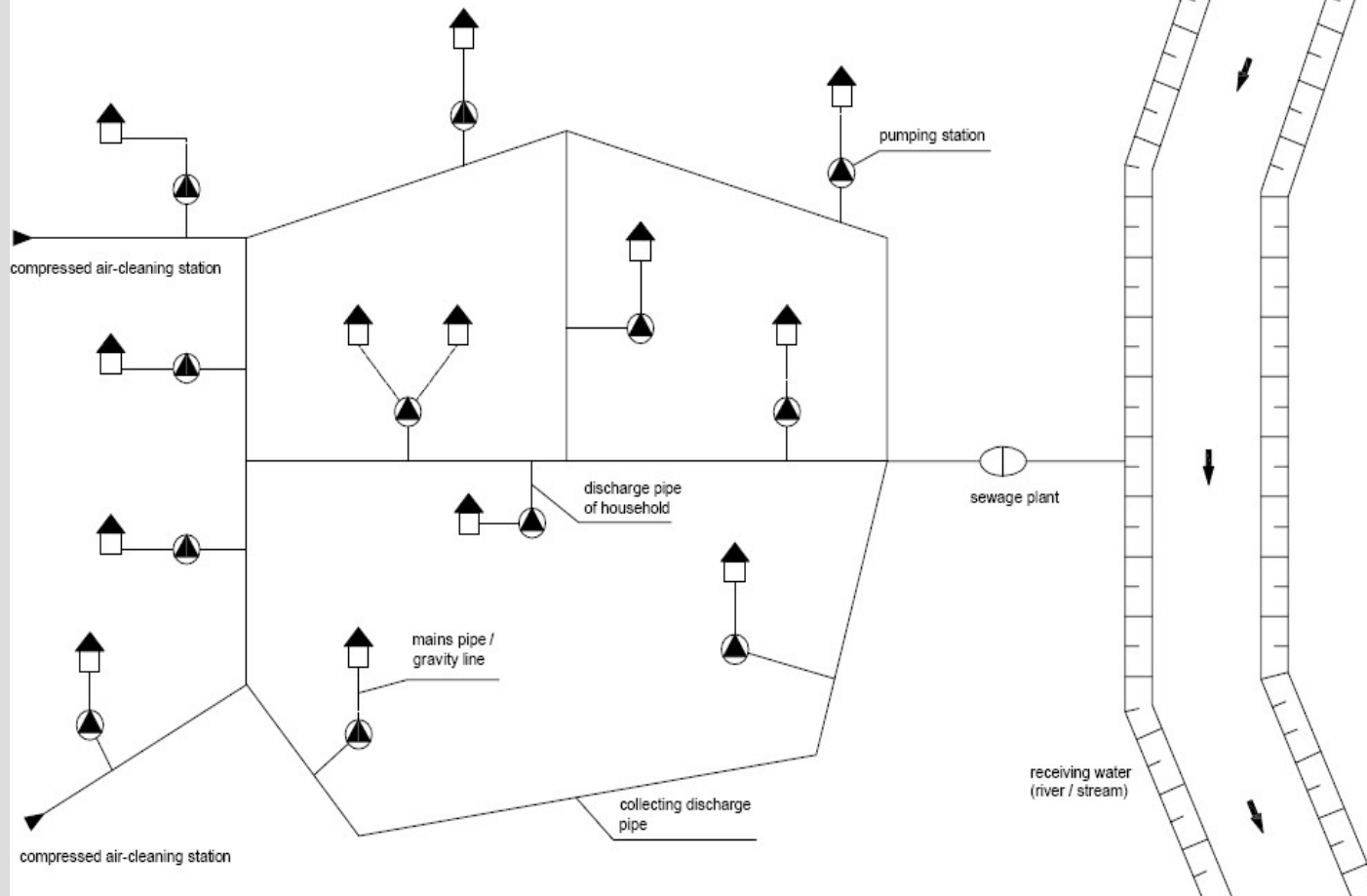
CK pumping station

Compacta

Mini-Compacta

Ama-Drainer-Box

## Pressure draining system with compressed air-cleaning station



## Pumped drainage systems Components of a pumped drainage network

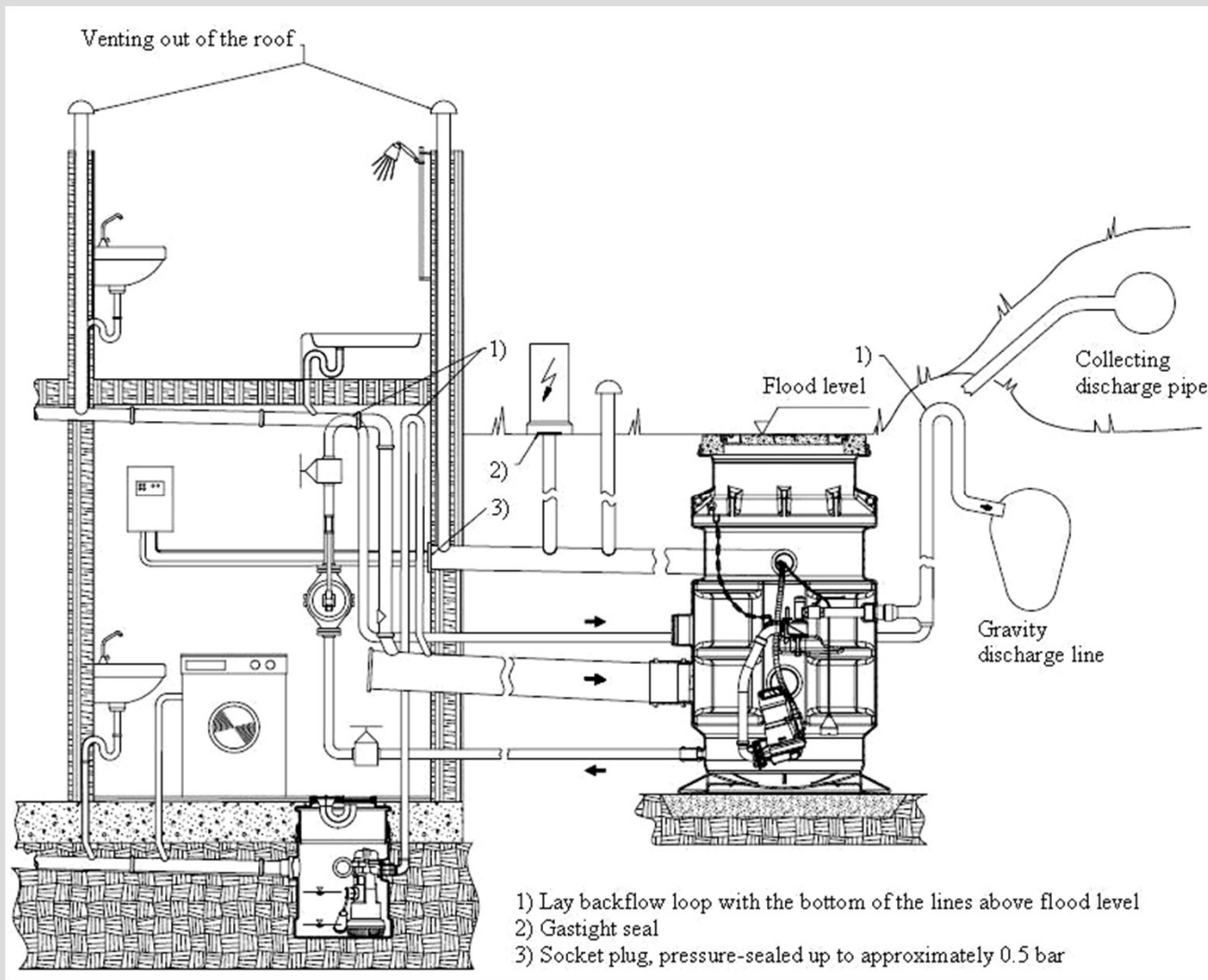
- building connections, incl. pumping stations inside the building and branch lines
- pressurised collection lines (if appropriated)
- switchgear / controls

## Pumping Station CK 800

### **Fields of application**

- waste water management in the domestic, industrial and commercial sector
- waste water disposal for buildings and properties located below flood level
- communal waste water disposal for multiple residential housing units (e.g. terraced housing)
- decontamination / rehabilitation of properties
- also retrofitting in case of drainage and/or flooding problems in “old building stock” areas
- pressure drainage





## Pumping station CK 800 Installation

For frost-proof installation of pipe work outside of buildings with backflow loop we recommend the following alternatives:

- in slopes,
- underneath planted embankments,
- inside externally mounted heated control cabinets,
- inside auxiliary buildings

# WET WIPES WELCOME

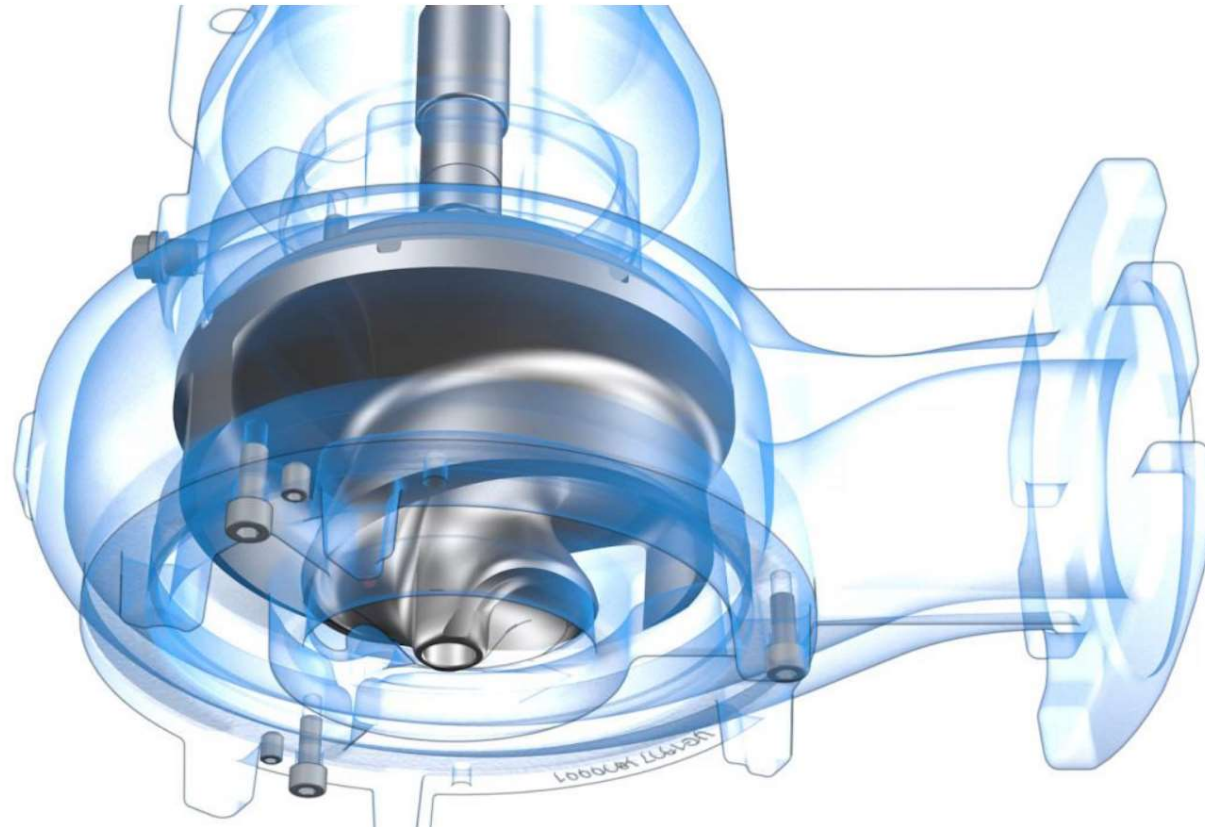


## Amarex

Dual performance submersible pump

Product presentation

**Dmax: efficiency hydraulic up to 76%**



80, 100, 150



Up to 320 m<sup>3</sup>/h  
Up to 38 m



D-Flector  
technology  
Solid content up to  
13%



Product presentation

## Why a new Amarex?

Higher efficiency



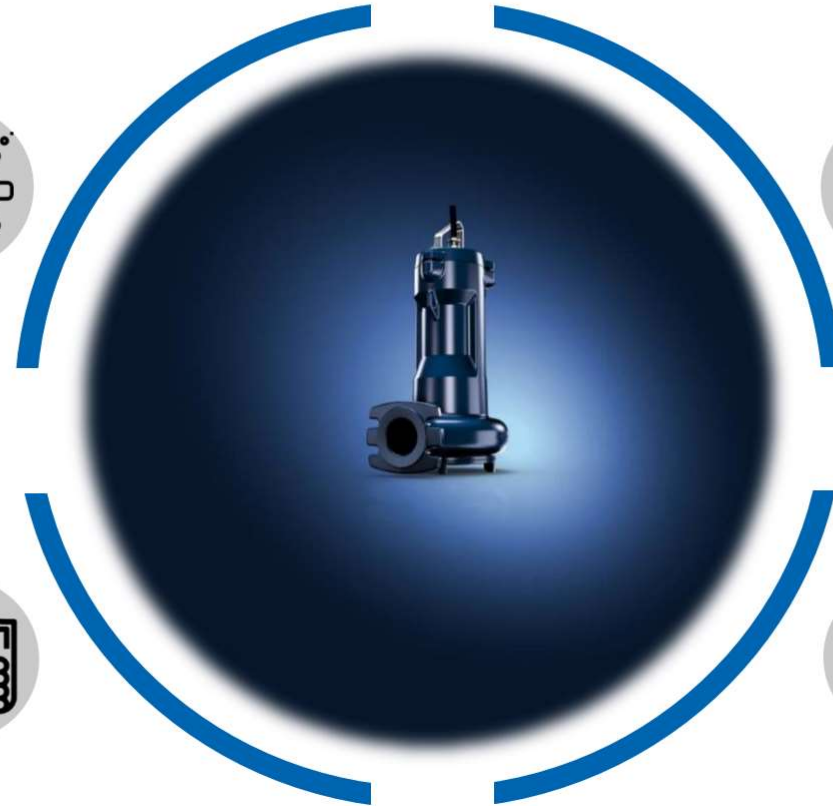
Better clog-free performance



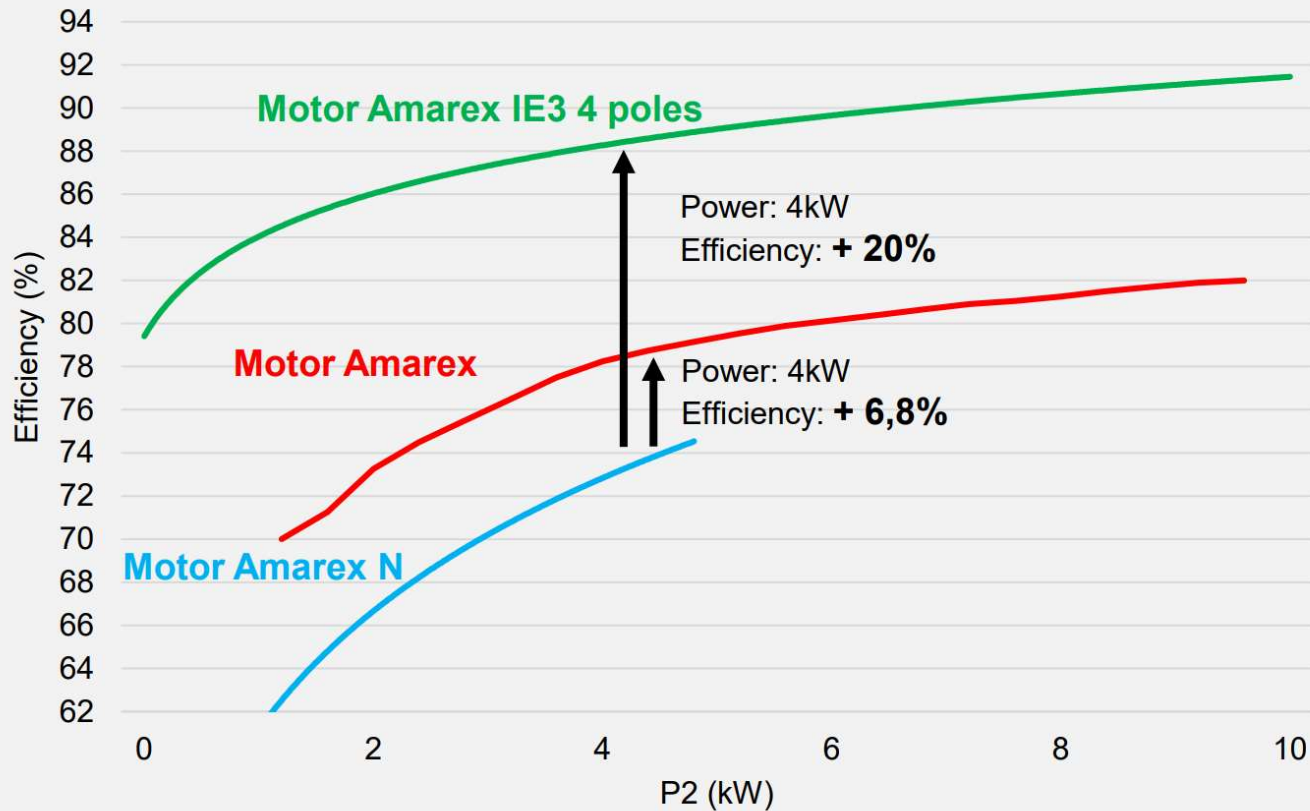
Durability improved



More flexibility



## Motor efficiencies Amarex 50Hz



## High efficiency Motor efficiency improved

A wide range to meet all your duty points:

- Class H motor
- IE3 motors (optional)



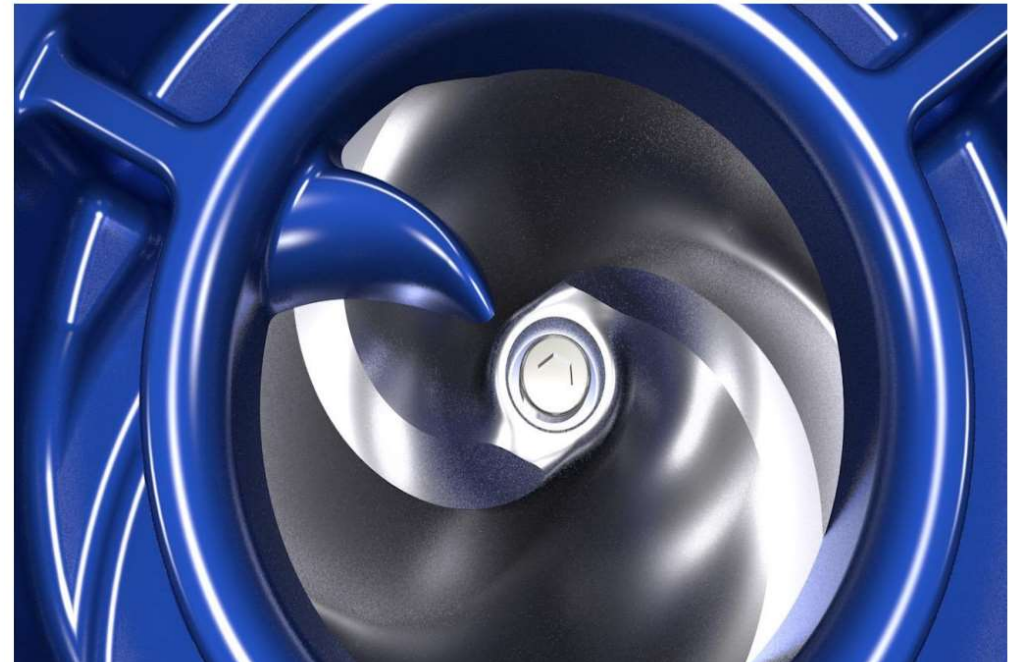
Clog-free

## D-Flector: the flush effect

KSB D-Flector's angle is **increasing** during impeller rotation:

- Increases centrifugal flush effect
- Eases evacuation outside of the impeller, thanks to the groove
- Avoids cutting tissues

**View from the bottom, as the impeller is turning**



Flexibility

## Go To Amarex: new replacement tool app

Finding the right one has never been so easy...



Customer owns a competitor's pump and wants to replace it...



By selecting the designation of the competitor pump...



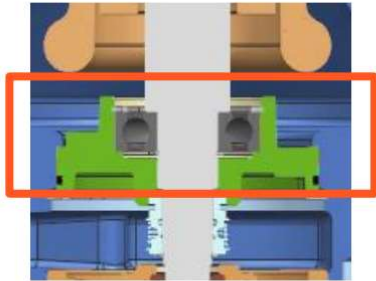
...the app finds directly the right Amarex with the right claw for the duckfoot.



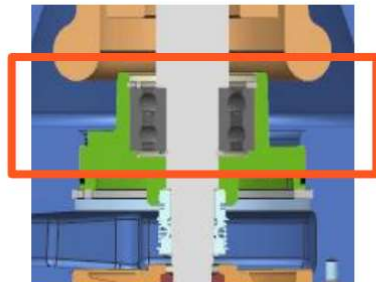
Durability

## Longer lasting bearings: up to 11 years

### New bearings



**Simple** row bearings  
In standard for Fmax



**Double** row bearings  
In standard for Dmax  
In option for Fmax - specific application

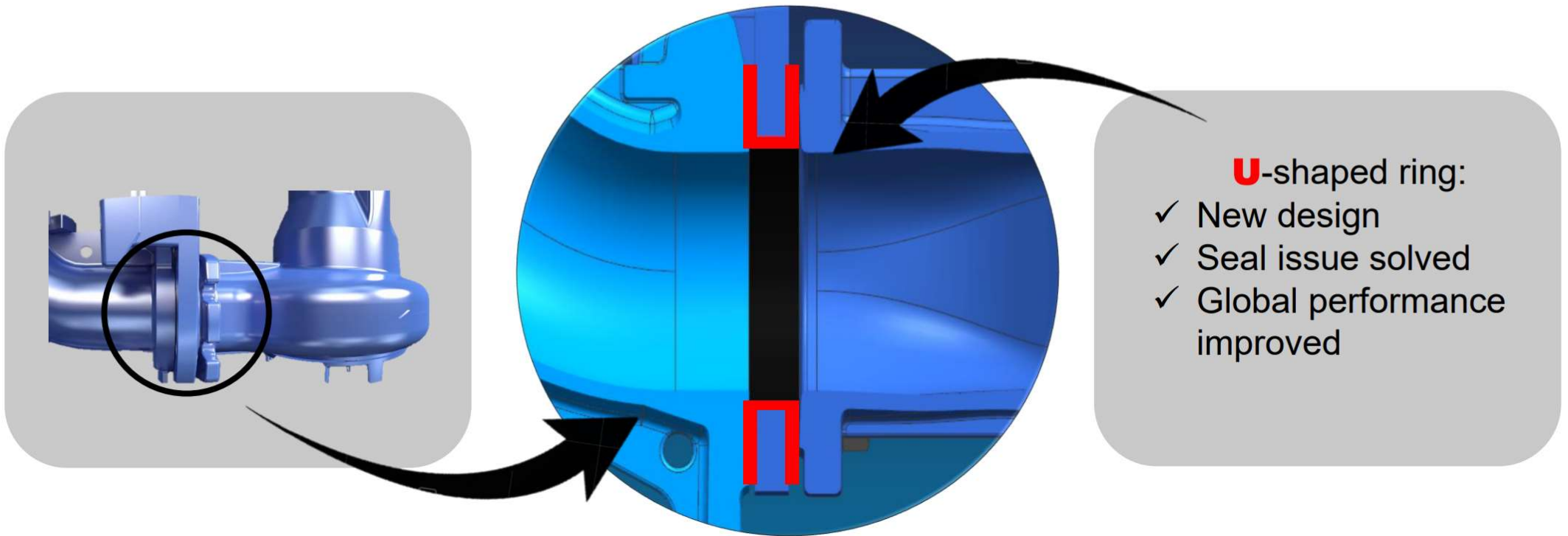
### New lifetime

Up to **100.000 hours** (11 years) at Qopt.



Durability

## Perfect watertightness



- U**-shaped ring:
- ✓ New design
  - ✓ Seal issue solved
  - ✓ Global performance improved

Durability

## An easier installation

A new large stainless  
**handle** makes installation  
and maintenance easy



Durability

## Cable gland modularity



Standard cable gland



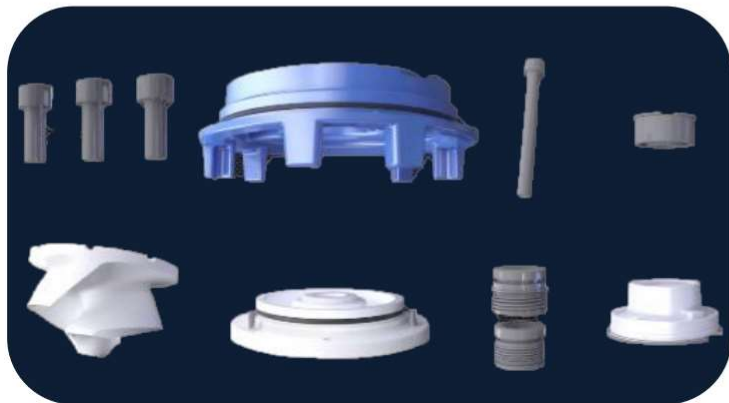
Optional: resin cable gland for maximal protection (ATEX, specific application)



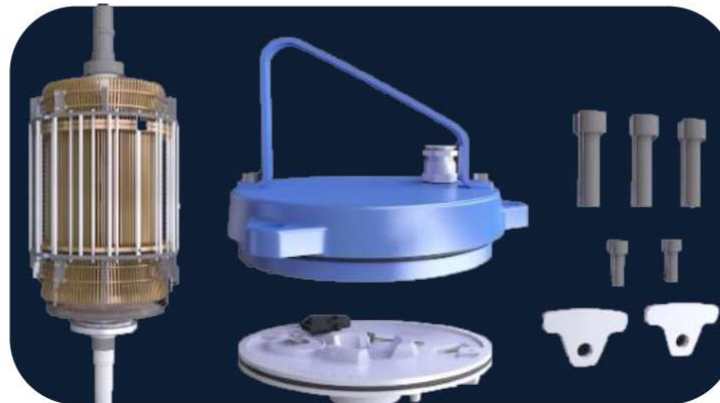
Durability

## Easy maintenance at low costs

**Easy hydraulic maintenance** with fast assembly/disassembly processes



**Easy motor maintenance** easier access thanks to new top cover



2 spare parts kits available **per impeller type**



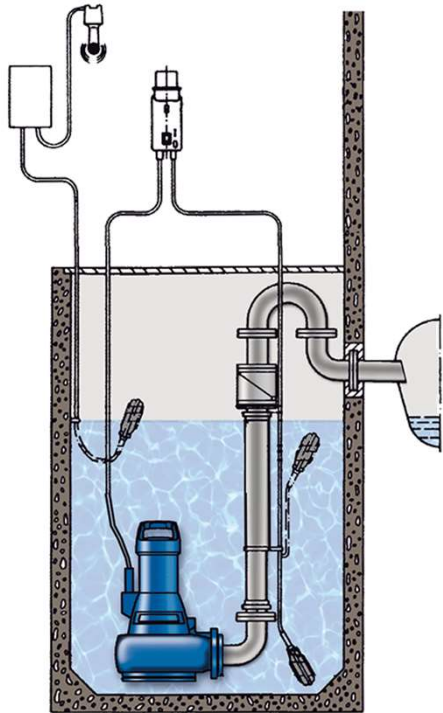


Ama-Porter – Submersible motor pump

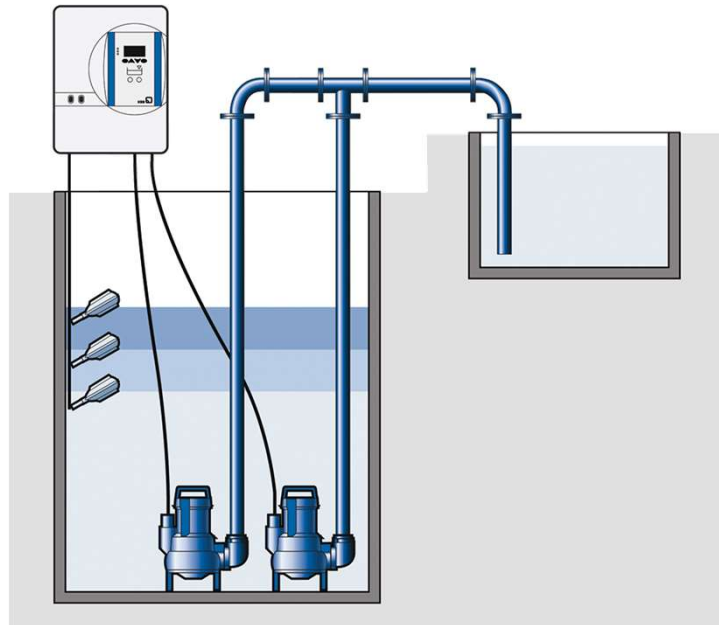
## Ama-Porter

### Applications

- Pumping all types of waste water
- Disposal of sludges and solids-laden fluids



Suggested  
Ama-Porter installation  
incl. high water alarm



Suggested  
Ama-Porter installation  
with LevelControl Basic 2

## Ama-Porter **Suggested installation**

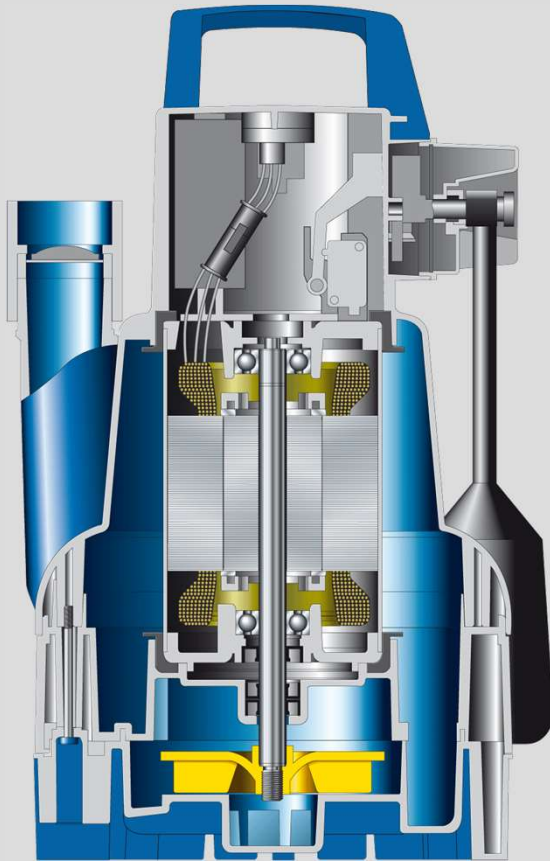


Ama-Drainer® N – Submersible Motor Pump

## Ama-Drainer® N

### Applications

- Drainage of pits, shafts, yards and cellars subject to a flooding risk
- Extraction of water from rivers and reservoirs
- Drainage of underground passages
- Lowering the surface water level
- Drainage



## Ama-Drainer® N

# Benefits

### **Absolutely tight**

Magnetic switch with adjustable, variable level control and anti-overwinding device. Straightforward adaptation to external control system with locking disc.

### **Easy to replace**

Cable with plug-type connector

### **No drainage of the discharge pipe**

Integrated swing check valve

### **Low space requirement**

Vertical discharge nozzle allows installation in narrow sumps, for example.

### **Protected against overload & overheating**

Integrated motor protection & Frame-cooled enclosed motor. Permits operation even when motor is not submerged

### **Long service life**

Low-weight and corrosion-proof thanks to high-quality plastic casing. Noise-absorbing, abrasion-proof and impact-resistant.

### **Economic operation**

Optimised hydraulic systems and motors for large pump output at high efficiency



## mini-Compacta US1.40 E/D

Background – What's New in the Standards

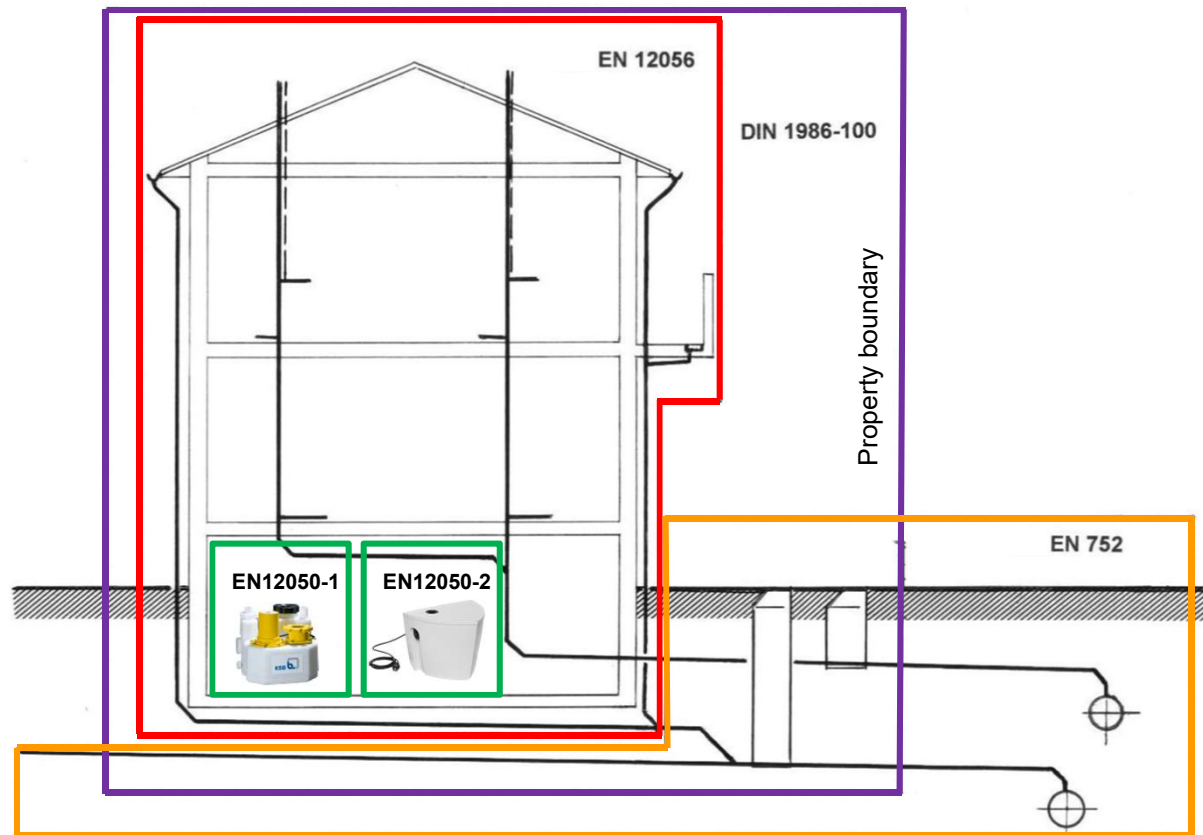
PU-GP34, P. Jung  
October 2015





Standards: an overview

## Standards applying to drainage of buildings and premises



EN 752: Drain and sewer systems outside buildings

EN 12056: Gravity drainage systems inside buildings

DIN 1986-100: Drainage systems for buildings and premises

EN 12050: Waste water lifting plants for buildings and sites – Principles of construction and testing

→ **New edition EN 12050:2015**  
(applicable since May 2015)

## mini-Compacta US 1.40 E/D

# Design



mini-Compacta US1.40 E/D

- Nominal tank volume: 40 litres
- Effective volumes: - For horizontal inflow, 180 mm: 10 litres  
- For vertical inflow: 17 litres
- Hydraulic system S1:  $Q_{\max} = 14.2 \text{ m}^3/\text{h}$ ,  $H_{\max} = 18 \text{ m}$
- Fluid temperature:  $T_{\max}$  up to  $40^\circ\text{C}$ , for a short period (max. 5 min) up to  $65^\circ\text{C}$
- Motor rating: - Design E: 230 V, 1~: 1.65 kW  
- Design D: 400 V, 3~: 1.5 kW
- Connection to power supply – ready to be plugged in:  
- Design E: 230 V, 1~: shockproof plug  
- Design D: 400 V, 3~: CEE plug (French variant: ready to connect)
- Mode of operation: S3-50 %, max. 60 start-ups/hour
- Supplied as complete package: ball check valve included in scope of supply
- Control system for all designs:



LevelControl Basic 1



mini-Compacta US1.40

## Simple and versatile



Super-compact sewage lifting unit with full functionality for the smallest of installation spaces, ideal for private homes.

Compliant with EN 12050-1:2015

- Simple, robust sewage lifting unit with full functionality (not a macerator)
- Quiet operation: noise emission  $\leq 70 \text{ dB}_{(A)}$
- Ideal for pumping waste water across 1 to 2 storeys
- Ready to be plugged in – no need to call on an electrician for the installation.
- The smallest, fully functional lifting unit to EN 12050-1 (by KSB)

➤ Also for direct use in the bathroom concealed in a suitable pre-wall system (depth  $\geq 400 \text{ mm}$ )

- Versatile
- No machinery room necessary
- Simple, compact LevelControl Basic 1 control unit
  - unobtrusive also when mounted in the bathroom or living areas
- Only prerequisite:
  - All serviceable system parts need to be accessible (through a removable access cover in the pre-wall system).



mini-Compacta US1.40

## Applications and market opportunities



- Ideal for new buildings: compact and cost-efficient



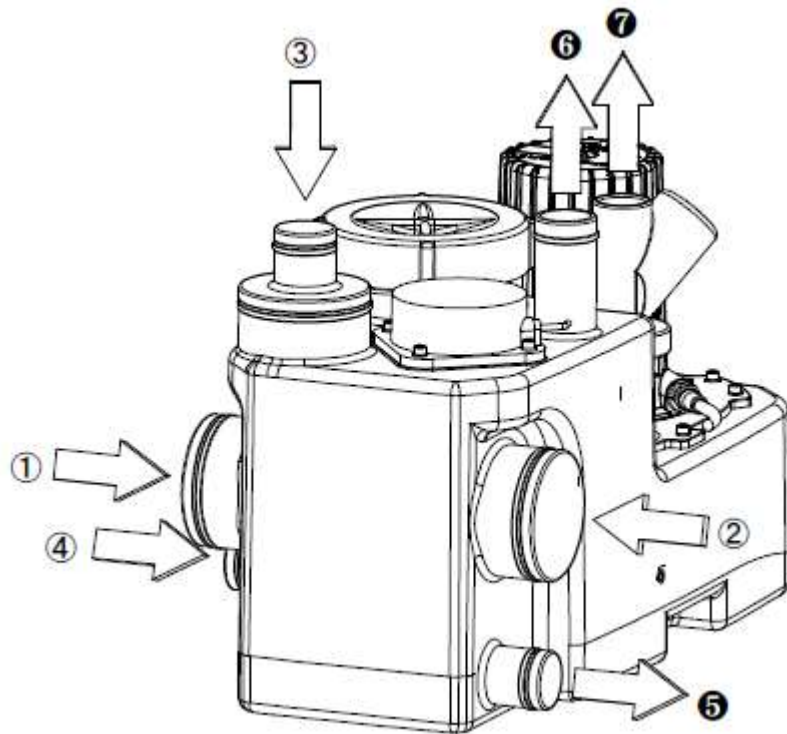
- Ideal for refurbished buildings:
  - ✓ Discharge line cross-section DN 32 or DN 50
  - ✓ Available for 230 V or 400 V mains voltage



- Suitable for worldwide use
  - ✓ Depending on mains voltage and frequency
  - ✓ Special variants on request via TSS Building Services Pegnitz (after product launch)

mini-Compacta US1.40

## Connections – Details



Number	Connection for ...
1	Inflow DN 100 (horizontal, 180 mm)
2	Inflow DN 100 (horizontal, 180 mm)
3	Inflow DN 100/50 (graded, vertical)
4	Inflow DN 50 <sup>1)</sup>
5	Drain DN 40
6	Vent DN 50
7	Discharge line G1 ¼"

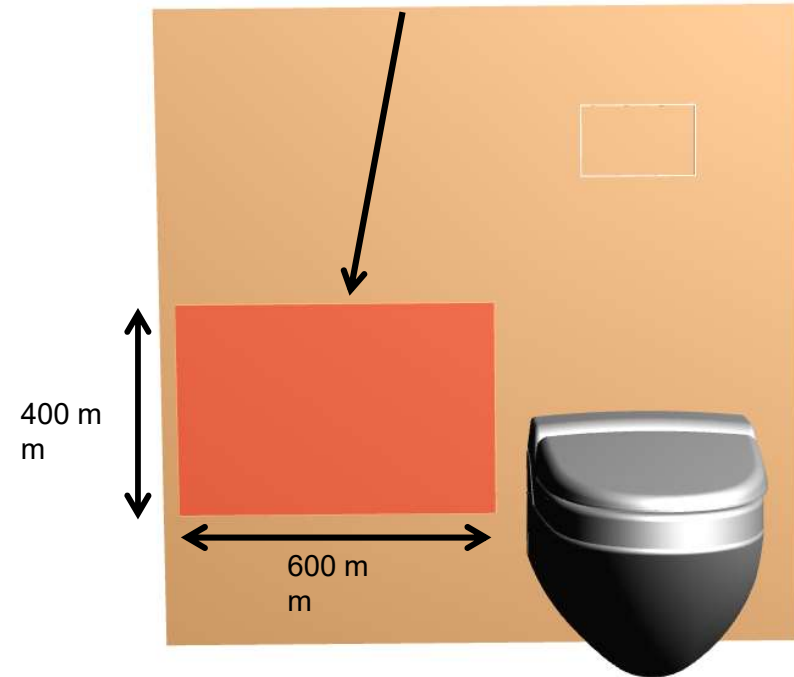
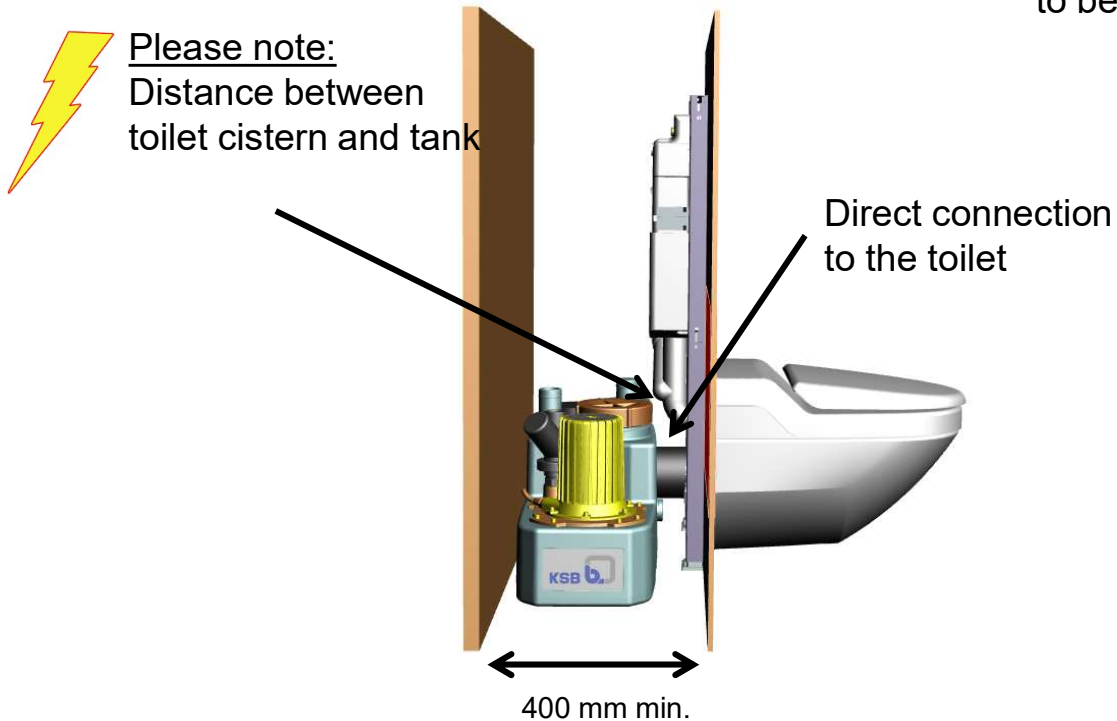
<sup>1)</sup> To prevent backflow, all sanitary appliances must be connected to the lifting unit with their pipe invert at least 180 mm above the tank floor. This connection is not suitable for discharge from shower basins.

mini-Compacta US1.40

# mini-Compacta US40 – Concealed in a suitable pre-wall system



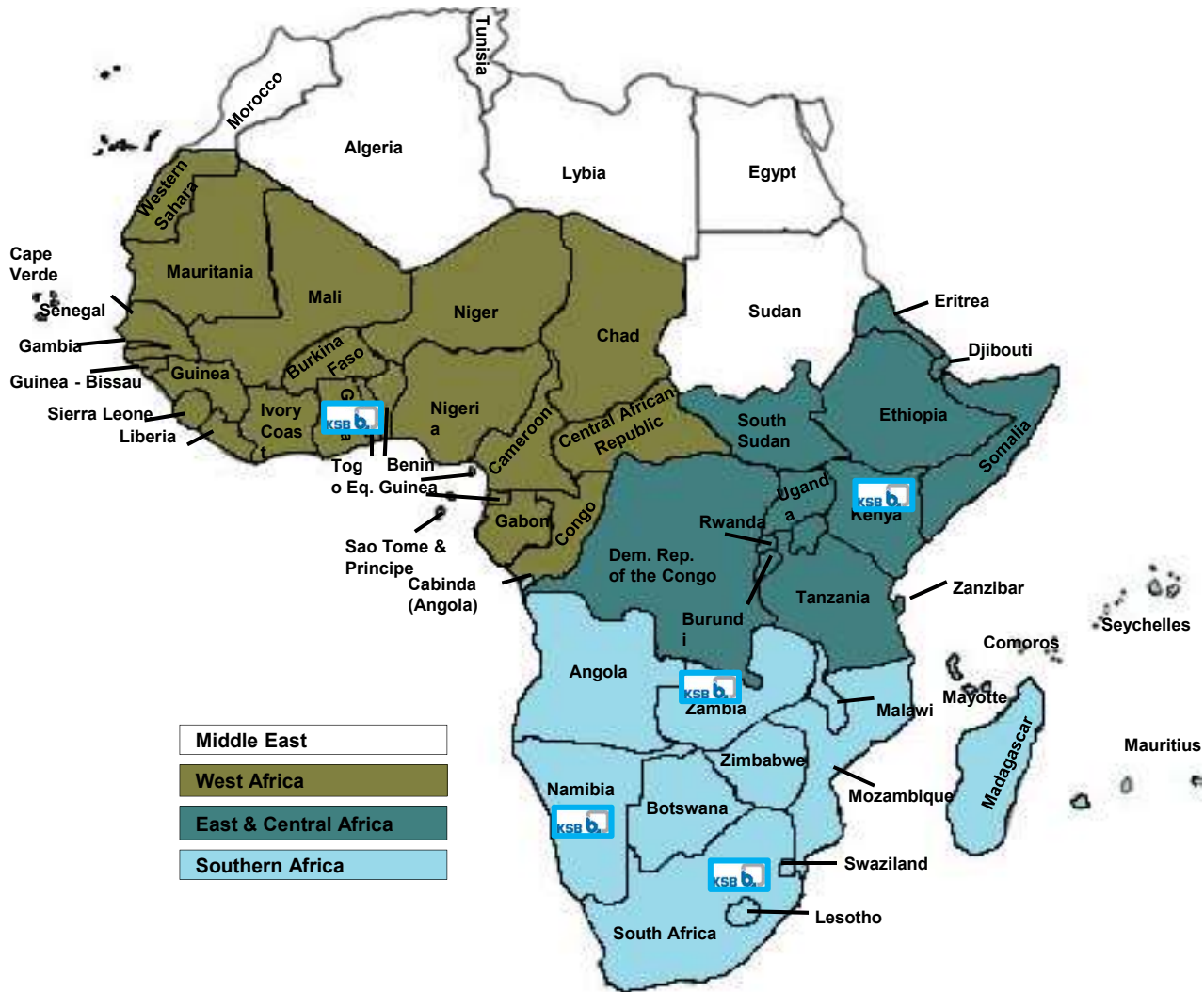
Conditions for standard-compliant installation:  
Appropriately dimensioned opening in the pre-wall for work  
to be carried out (minimum dimensions indicated below)





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## KSB South Africa Sub-Region

### “Sub-Saharan Africa”

2019 KSB Pumps & Limited in Kenya Nairobi

2017 KSB Zambia Limited Kitwe Zambia

2015 KSB Branch in Namibia

2010 KSB’s resident office in Accra, Ghana

1959 KSB Pumps & Valves in South Africa.

Headquarter with production facilities  
in Johannesburg with 450 employees



Our program includes standard water pumps, process pumps, mining pumps, pumps for power stations and engineered pumps for special designs.

KSB South Africa

## Product Programme

KSB Pumps and Valves (Pty) Ltd. manufactures pumps under license of our Parent Company in Germany (KSB AG) as well as of GIW in the US, and is a fully certified member of our KSB's Global Manufacturing Network.

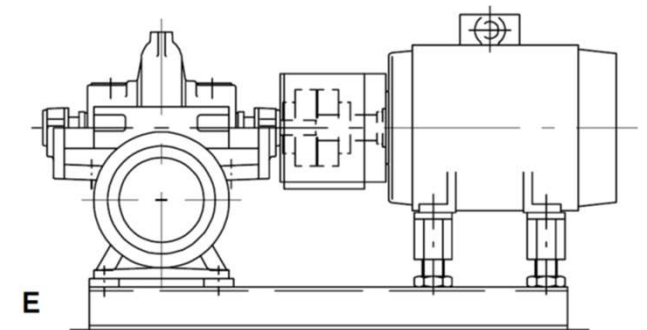




## KSB South Africa / KSB Group **Product Programme**

### Split casing pumps

- General water supply
- Air conditioning
- Cooling systems
- Drainage pumping stations
- Raw, pure & service water







## KSB South Africa **Operation**

KSB South Africa has fully equipped operations facilities

- Machining
- Welding
- Assembling
- Testing

ISO certificated



## KSB South Africa **Operation**

KSB South Africa has fully equipped operations facilities

- Machining
- Welding
- Assembling
- Testing

ISO certificated

- 1871** Klein, Schanzlin and Becker establish the company in Frankenthal, Germany
- 1887** KSB becomes a Public Limited company under German law
- 1920s** KSB pumps are first sold in the South African market through Andrag, Cape Town
- 1940s** KSB products are sold in other parts of South Africa through Steelmetals
- 1959** **KSB Pumps South Africa is established. The company is based in Johannesburg on premises shared with Steelmetals**
- 1964** KSB Pumps South Africa moves to a site in Trojan, Johannesburg, which houses sales and assembly, while Alpha Engineering serves as machine shop

KSB SA - The Whole Story  
**Our successes at a glance (1/4)**

- 1971** KSB Pumps South Africa moves to the current location in Activia Park, Germiston / JHB, where sales and assembly take place.
- 1977** KSB Pumps South Africa is assessed and the process of local manufacture starts.
- 1996** KSB Pumps South Africa acquires additional space alongside its Johannesburg head office
- 2007** In January, KSB Pumps South Africa takes on a black economic-empowerment company as a partner, namely MEDU Capital Holdings, which has a share of 25% plus 1 (in the meantime 15% + 1)
- 2009** KSB Pumps and Valves (Pty) Ltd. establishes a new dedicated service facility near the head office and production facility in Elandsfontein, Gauteng

KSB SA - The Whole Story  
**Our successes at a glance (2/4)**

**2009** KSB Pumps and Valves (Pty) Ltd. receives the MBK certification for our RPH API product range (only five KSB companies outside of Europe have passed that hurdle)

**2011** KSB Pumps and Valves (Pty) Ltd. expands business into Africa by opening a second resident office in Nairobi, Kenya to cover East/Central Africa

**2013** KSB Pumps and Valves (Pty) Ltd. acquires additional properties to guarantee expansion for its main manufacturing sites

**2015** KSB establishes a resident sales office in Klein Windhoek covering the whole of Namibia

KSB SA - The Whole Story  
**Our successes at a glance (3/4)**

KSB SA - The Whole Story  
**Our successes at a glance (4/4)**

- 2017** The South African holding company KSB Pumps S.A. (Pty) Ltd acquired 60 percent of Aqua Africa Limited, now operating as KSB Zambia Limited.
- 2017** KSB Service Division moves into bigger premises in Jet Park.
- 2018** In July 2018 Insikazi Synergies (RF) (Pty) Ltd, 100% black women owned company acquired 30% shareholding enabling KSB to achieve a B-BBEE Level 1 status.
- 2019** KSB opens a dedicated Service Centre in Upington.
- 2019** KSB South Africa celebrates 60 years.

# Contact and Copyright

## 1. South Africa

**KSB** Pumps and Valves (Pty) Ltd.

Corner North Reef Road & Activia Road, Activia Park  
Germiston (Johannesburg), 1429, Republic of South Africa,  
MD: Peter Weber [peter.weber@ksb.com](mailto:peter.weber@ksb.com)

## 2. Ghana

**KSB** Pumps (SA) (PTY) Limited

17, Kinshasa Close – East Legon  
Accra – Ghana

Area Manager/Western Africa: Outare Kokobissi,  
[outare.kokobissi@ksb.com](mailto:outare.kokobissi@ksb.com)

## 3. Namibia

**KSB** Pumps (SA) (PTY) Limited

Area Manager: Klaus Streit [Klaus.Streit@ksb.com](mailto:Klaus.Streit@ksb.com)



[www.ksb.com](http://www.ksb.com)

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## 4. Kenya

**KSB** Pumps and Valves Ltd - Kenya

Prabhaki Industrial Park Units A2 and B3 Babadogo Road Ruaraka,  
Nairobi, Kenya

MD: Ron Wheeler, [ronald.wheeler@ksb.com](mailto:ronald.wheeler@ksb.com)

## 5. Zambia

**KSB Zambia Limited**

Musapas Business Park, Kamfinsa Junction, Ndola/Kitwe Dual  
Carriageway, Kitwe, Zambia. P.O. Box 20055, Kitwe.

MD: Alfred Jacobsen, [alf@ksbzambia.com](mailto:alf@ksbzambia.com),

## 6. Sub-Saharan Africa

**KSB** Pumps and Valves (Pty) Ltd.

Corner North Reef Road & Activia Road, Activia Park  
Germiston (Johannesburg), 1429, Republic of South Africa,

**Area Manager: David Jones, [david.jones@ksb.com](mailto:david.jones@ksb.com)**



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## Amacontrol III

# Product description

### Description

- **Protection and monitoring of pumps and submersible mixers by all-in-one device** for motor temperature measurement, bearing temperature measurement, leakage measurement, vibration measurement and voltage measurement.

### Application

- In water and waste water systems in combination with Amacan, Amamix, Amaprop, Amaline, Amarex KRT or Sewatec



# What is monitored?

## Amacontrol III



- Motor temperature
  - Motor protection (bimetal, PTC)
- Bearing temperature
  - Resistance thermometer (Pt100), pump side / motor side



- Leakage
  - Float switch (mechanical seal leakage)
  - Electrode for leakage monitoring (moisture protection)



- Vibration frequency



- Short circuit and open sensor circuit



- Phase sequence, phase failure  
Phase asymmetry



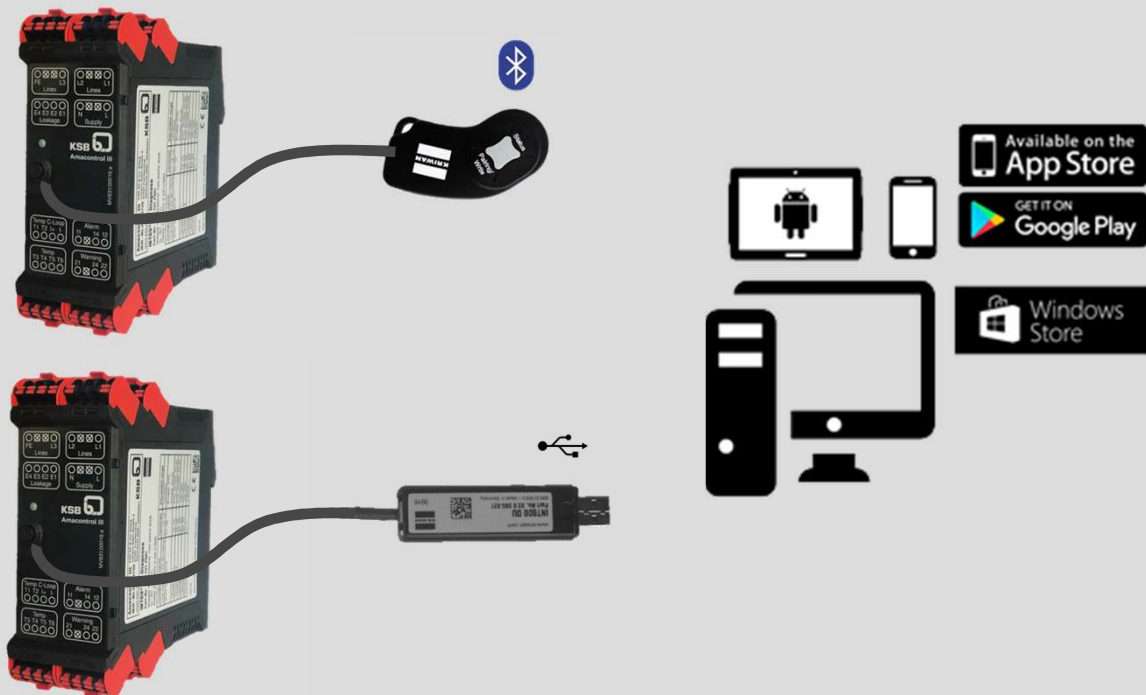
- Overvoltage  
Undervoltage

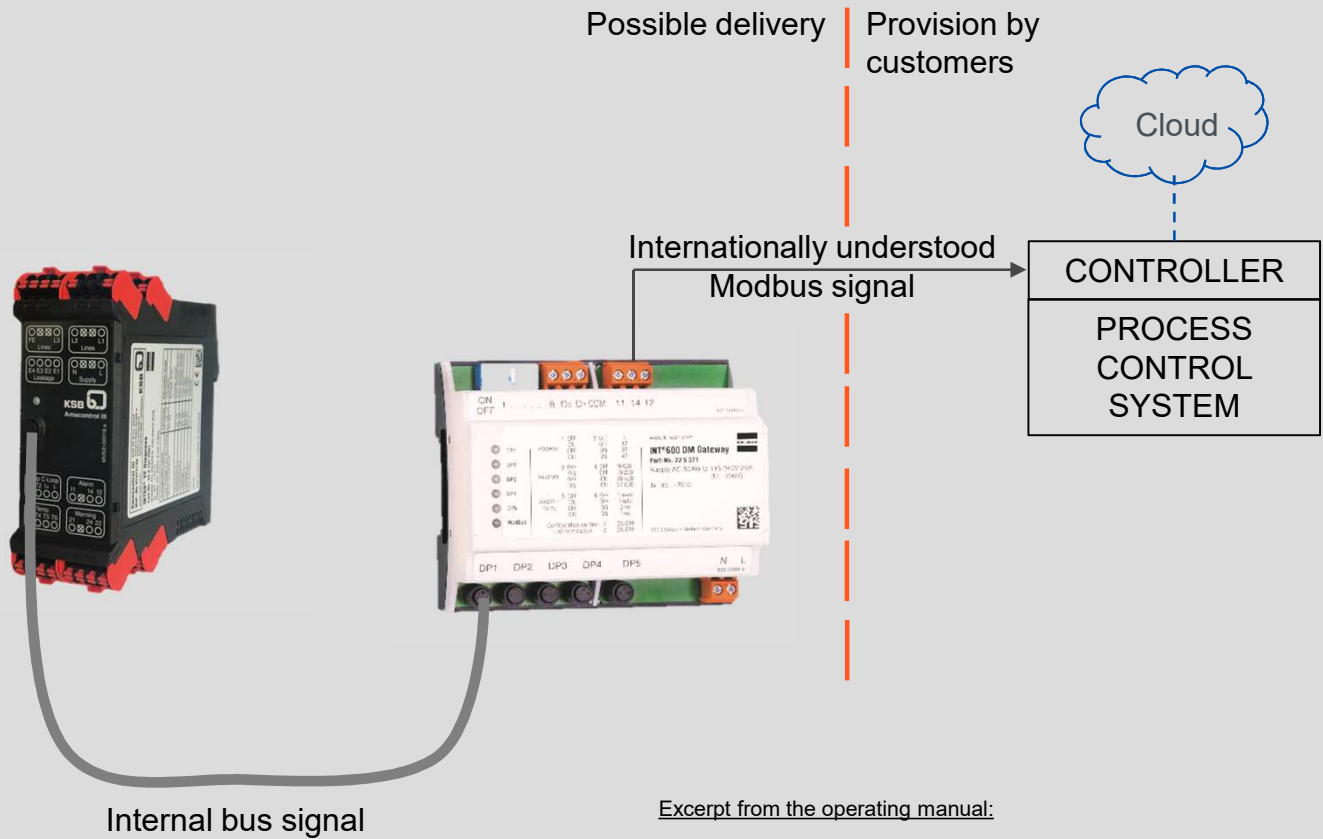
# Amacontrol III Networking

## LOCAL

- With USB connection cable (Mat. No. 01913080)
  - PC from Windows 10.0 // USB mini version C
- With Bluetooth connection cable (Mat. No. 01913079)

Start the app, click on Bluetooth, select the device (device number displayed)





Excerpt from the operating manual:

It is the system or machinery manufacturer's responsibility to ensure the correct overall functionality. KSB is not in a position to guarantee all properties of an overall system or machinery which was not designed by KSB. The overall concept of the control system into which this device is integrated must be validated by the user.

## Amacontrol III Networking

### GLOBAL

- With gateway via Modbus RTU (master / slave) (Mat. No. 01913081, 01913082)
- With connection cable (Mat. No. 01913083)
- One pump or one submersible mixer per Amacontrol III, 5 Amacontrol III devices per gateway

Speichern. Analysieren. Dokumentieren.



## Amacontrol III Functions

### Parameterisation

- Amacontrol III is factory-set for the corresponding product.
- Selected parameters can be adjusted in the app.
  - Leakage, trip delay
  - Leakage, re-start delay
  - Phase monitor
  - Service interval

Speichern. Analysieren. Dokumentieren.



## Amacontrol III Functions

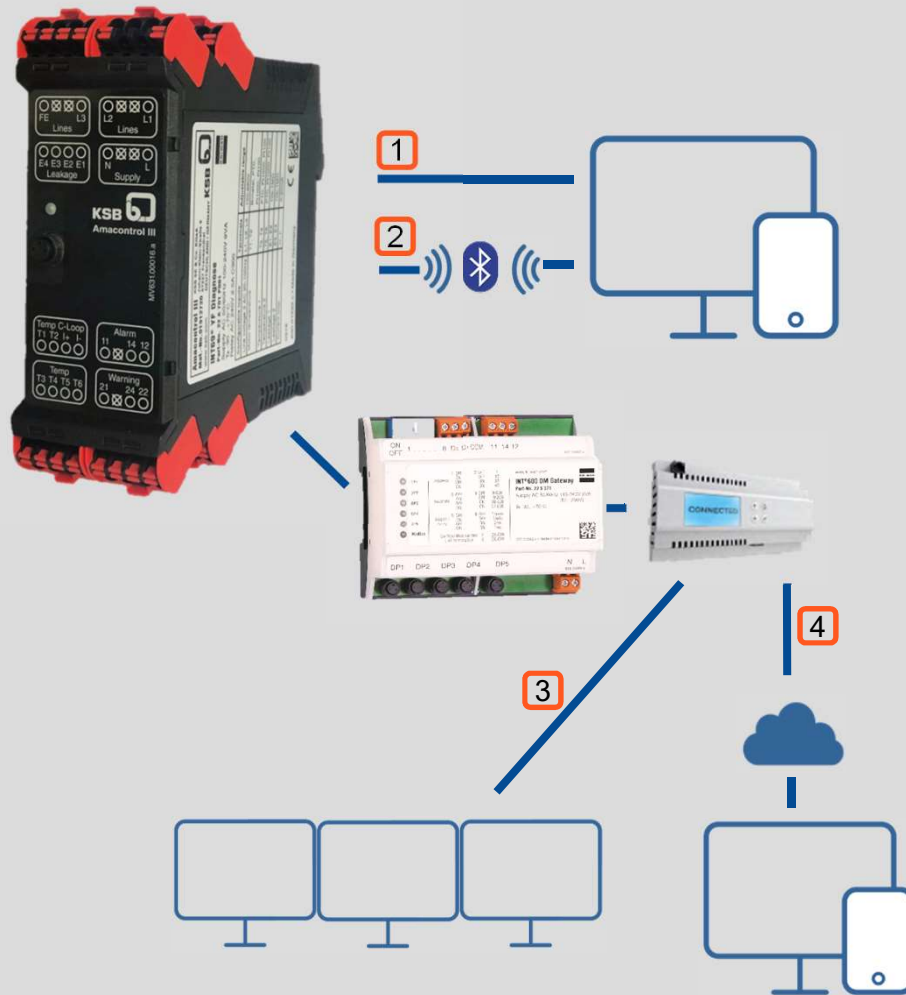
### Diagnosis

- Fast and easy diagnosis via the app
- A (green/orange/red) traffic light signal provides a quick overview
- Rolling circular buffer for data storage
- Adjustable resolution of the fault image
- Data analysis prior to and after the time a fault occurred
- Detailed fault image recognition and fault history
- Documentation

# Amacontrol III Functions

## Data storage

- Local (1, 2) in smartphone, tablet or PC
- or
- Global (3, 4) in control station or cloud





## Amacontrol III

# Product benefits

- Protection and monitoring of pumps and submersible mixers by all-in-one device for motor temperature measurement, bearing temperature measurement, float switch (mechanical seal leakage), leakage monitoring (electrode for leakage monitoring), vibration measurement and voltage measurement
- Easy to install in control cabinet on top hat rail; quick and easy wiring with push-in terminals
- Straightforward commissioning as each variant is pre-parameterised for the product it will be used with
- Increased operating reliability due to warning and cut-out in the event of a fault, with warning option via general alarm contact
- Extended service life of pumps and submersible mixers by preventive maintenance information
- Simple analysis of diagnosis data with saved history, recorded operating data and trends as well as a fault history
- Digitalisation
- Cannot be manipulated





## LevelControl Basic 2

# Benefits

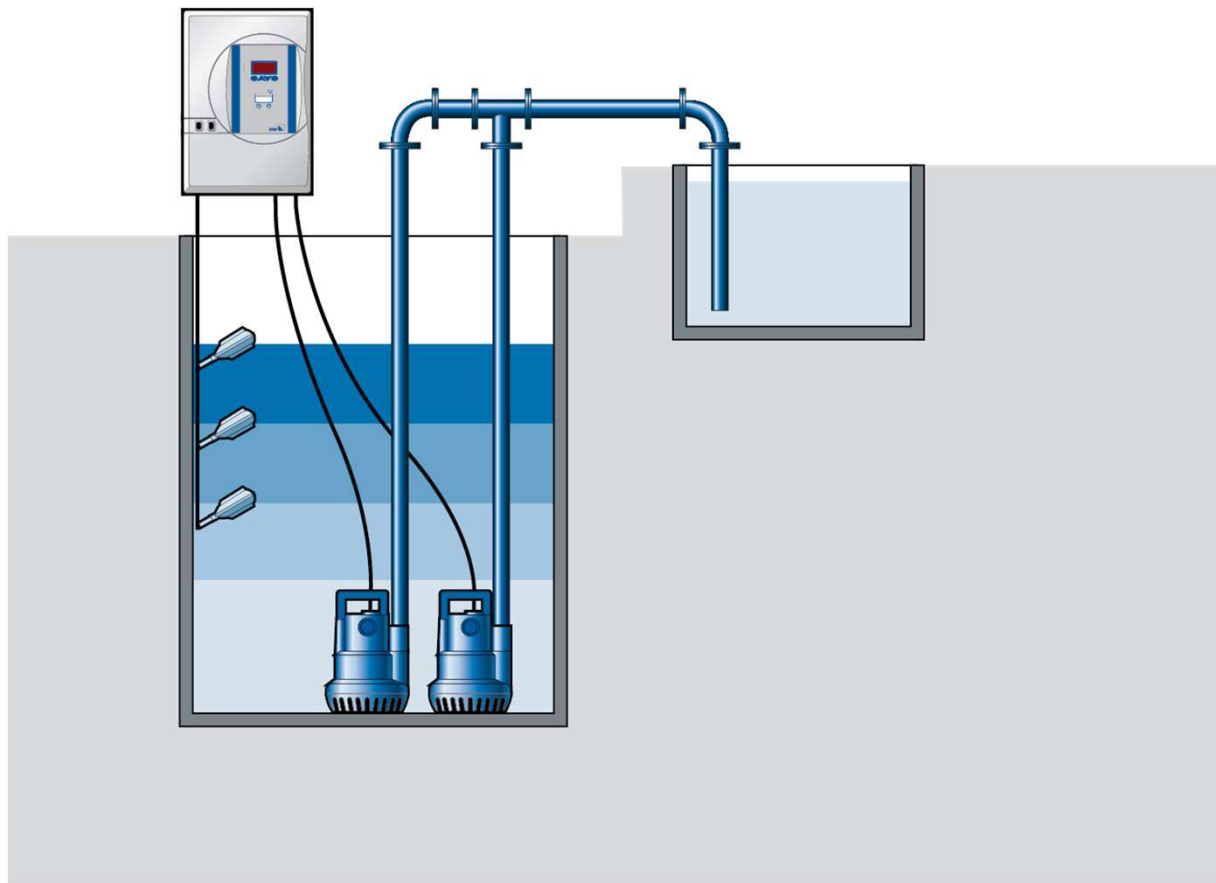
- **Reliable operation based on comprehensive information**
  - Display indicates major parameters
  - Display of measured values such as water level, operating hours, mains voltage, starts per pump, etc.
  - Operation and fault indication per pump



## LevelControl Basic 2

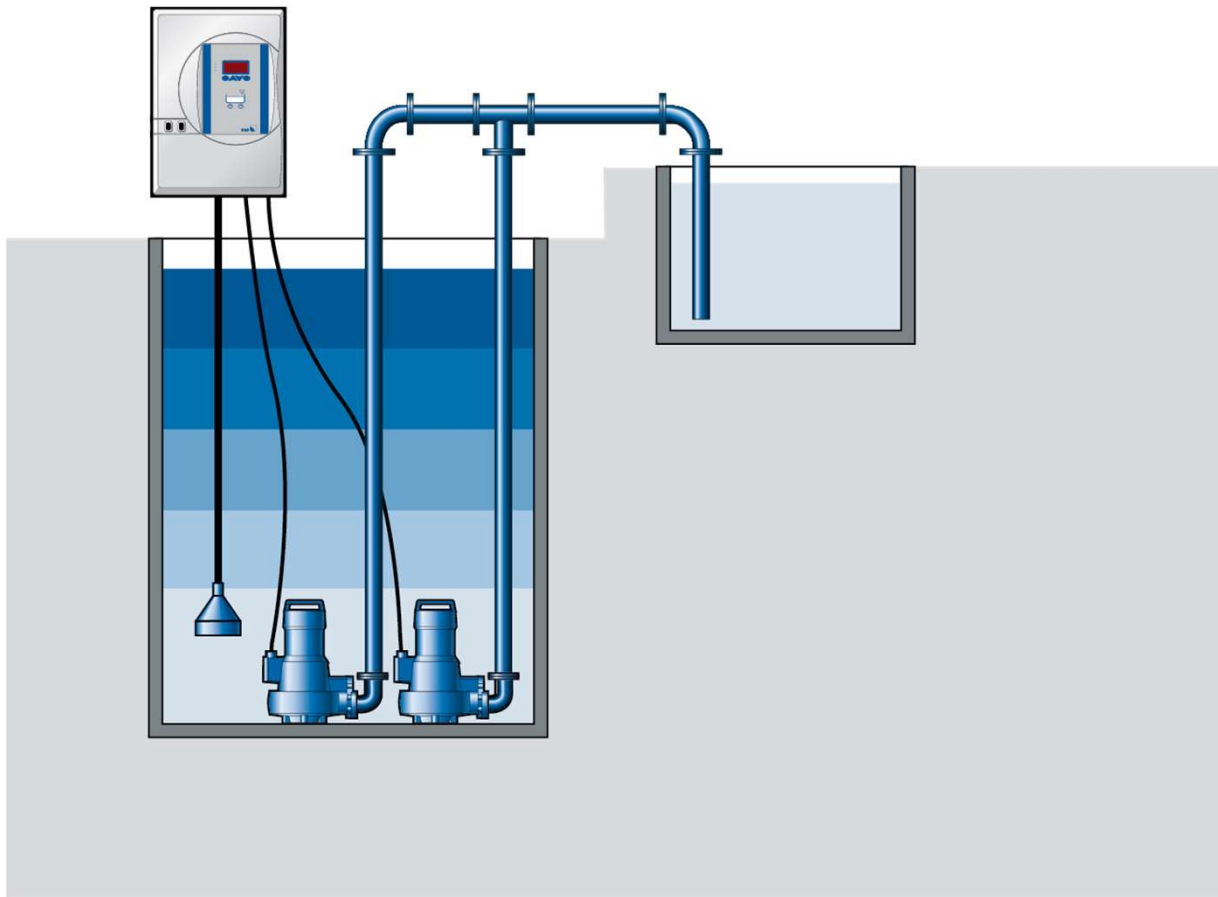
# Benefits

- **Comprehensive functionality makes for high system availability**
  - Overcurrent and short-circuit protection by miniature circuit breakers (230 V model) or motor protection switches (400 V model)
  - High water alert
  - Monitoring of the pumping station (voltage and phases, dry running, moisture)
  - System redundancy by control of stand-by pump
  - Optional activation of functional check run after idle period
  - Rechargeable battery retrofit kit for powering electronics, sensors and alarm equipment, e.g. horn



## LevelControl Basic 2 **Level detection**

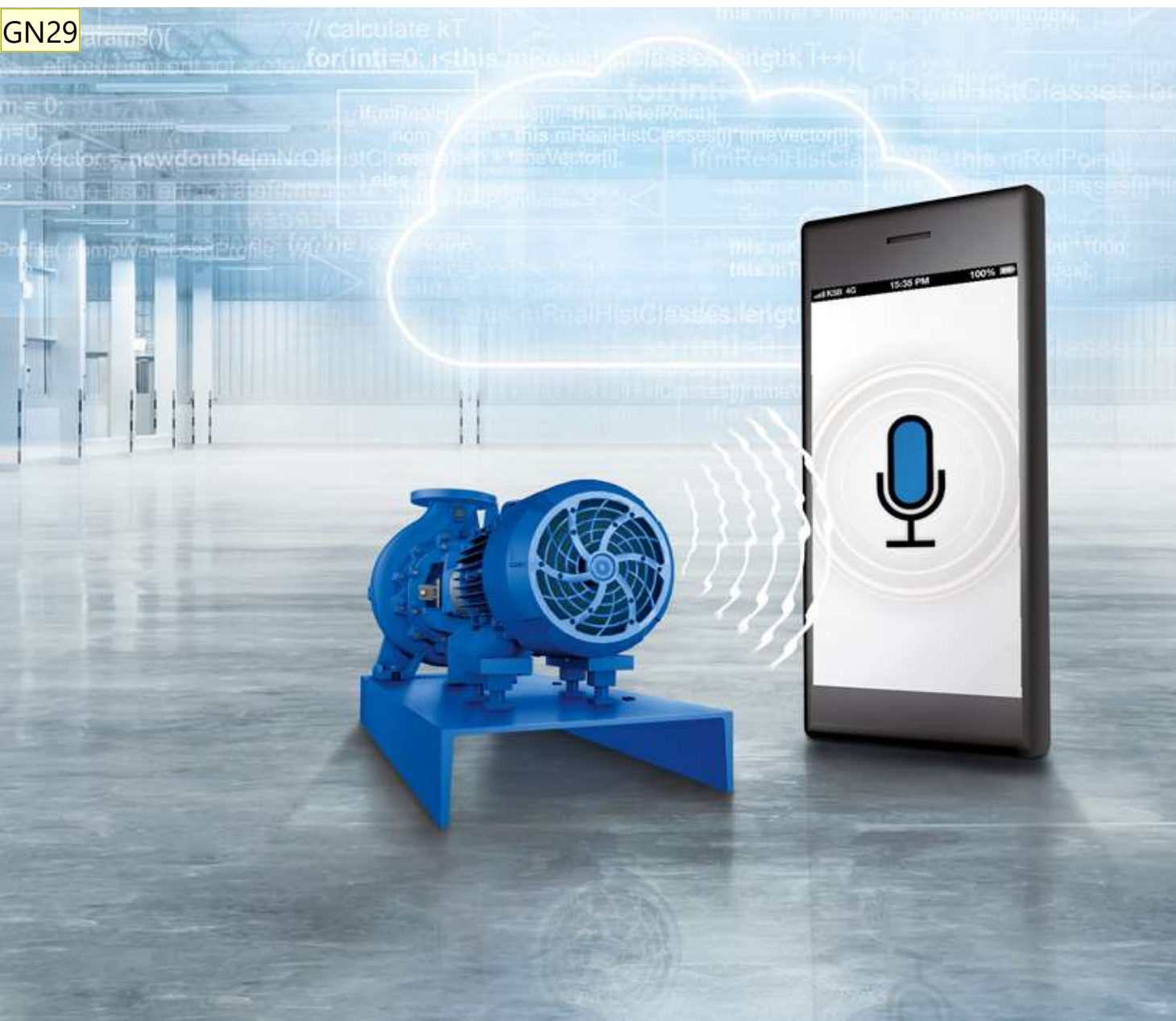
Level detection via  
float switches



LevelControl Basic 2  
**Pneumatic  
measurement/bubbler  
system**

Pneumatic  
measurement/bubbler system  
with pressure bell

GN29




## Digitalisation **KSB Sonolyzer®**

Energy efficiency check for your rotating equipment. The first app that hears whether you can save energy.


You can download the KSB Sonolyzer® app free of charge for your smartphone or tablet. The pump app is available for Android and Apple devices.



**KSB** 

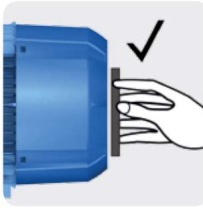
**KSB Sonolyzer:**  
a world first

The first app that hears whether you can save energy.




**FF**  
FLUID  
FUTURE  
SAVING ENERGY

**Easy measurement**



Hold your smartphone next to the motor to check the energy efficiency.

**Quick measurement**




Measurement takes just 20 seconds.

**Potential savings to be made?**




The results analysis shows whether the operating point is inside or outside the part-load range.

**Direct contact**




If required, you can get in touch with your local KSB contact directly for a detailed efficiency analysis using POC or SES.


**FF** System Analysis  
FLUID FUTURE  
SAVING ENERGY

**KSB** 

Scan QR code now



Available on the App Store | ANDROID APP ON Google play

**KSB** 

**KSB SE & Co. KGaA**  
Johann-Klein-Straße 9  
67227 Frankenthal (Germany)  
www.ksb.com

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## Why using variable speed drive ?

A reduction in energy consumption in the order of **60 %** can be achieved by use of frequency converters ! Due to the high energy saving potential, the additional costs are amortized after a short time.

Not only for water but also for waste water pumps





Digitalisation  
**Augmented Reality  
Services**

During service work, the user (e.g. on-site service engineer) receives live support from a KSB expert via data glasses.

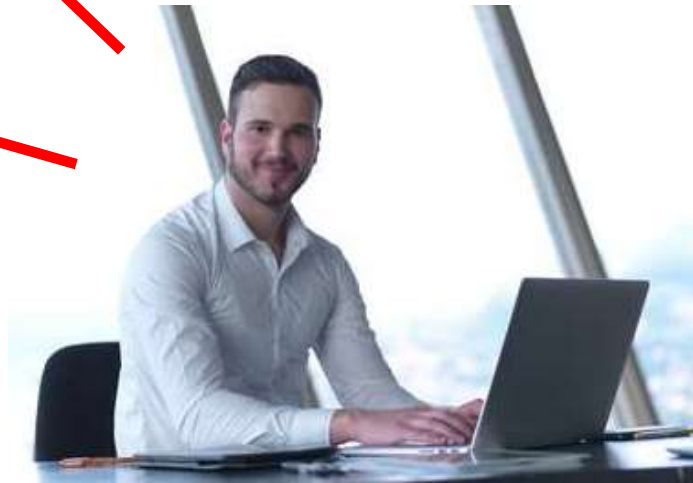


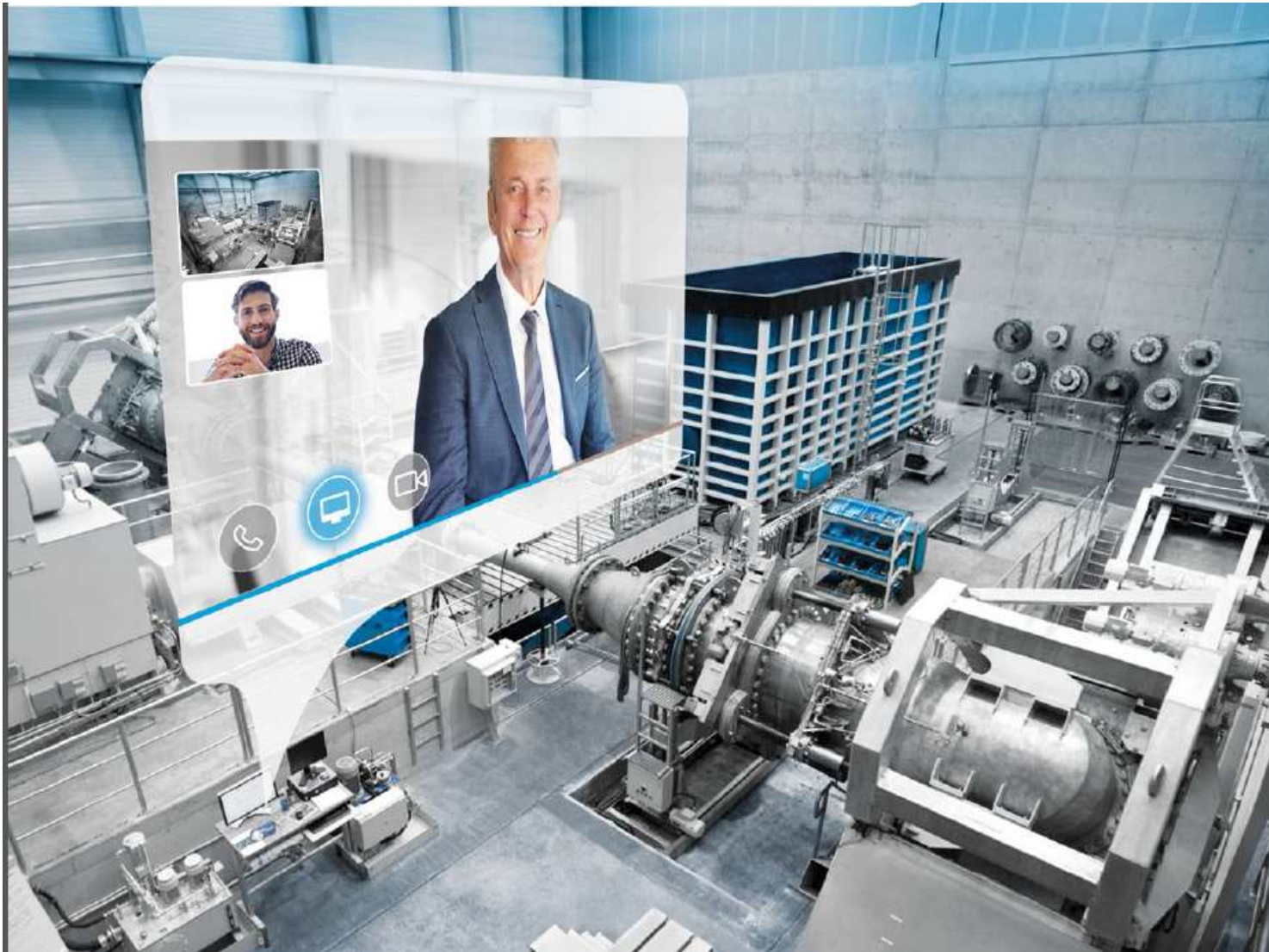


## Augmented Reality

Digital services by SupremeServ together with TSS

Describes a computer-aided perception or representation that expands the real world by virtual aspects. (Business encyclopedia, Gabler)





## Online remote acceptance testing in Halle via the Internet

Shortens delivery time

Saves time and costs

Camera (pump being inspected in the test facility)

Measurement of characteristic curves (from the PumpTest software)



## Digitalisation **3D Printing - Additive Manufacturing**

- Fast delivery of complex components
- New design and manufacturing options
- Reproduction
- Compatibility checks and advice on additive manufacturing



## Digitalization **Where Links Mean Business**

### **Web-Shop / electronic purchasing**

- Over 100,000 orders per year with incoming orders totalling more than € 200 million
- More than 30,000 pumps and valves, as well as 1.6 million spare parts lists available
- Direct integration of the customer order system

### **KSB EasySelect®**

- Software for selecting the right pump and valve for the job



## The KSB Group

# Contents

1. KSB Group
2. The KSB Brand
3. Applications, Products, References
4. KSB in South Africa & Sub-Saharan Africa
5. Digitalisation
- 6. KSB SupremeServ**
7. Research and Development
8. Corporate Social Responsibility



**KSB SupremeServ**

## KSB SupremeServ **New KSB Service Brand from 2018**

### **Our mission:**

- We are THE partner for operators and ensure reliable and efficient operation of their systems
- Independent of the application
- Always close to our customers worldwide

## KSB SupremeServ More Than Just Branding

- Comprehensive classic and digital service portfolio
- Tailor-made solutions in the field of original spare parts – standard and engineered
- Worldwide qualification of service personnel – employees, partners and customers



## KSB SupremeServ **Global Operations and No. 1 in Europe**

- Technical consultancy
- Installation & commissioning
- Maintenance, repair, retrofit
- Maintenance inspection management
- Total Pump Management
- SES System Efficiency Service
- Service for further rotating equipment
- Reverse engineering





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## Research & Development **Ideas that Deliver Real Customer Benefits**

Low energy consumption, high level of availability, a long service life and utmost reliability: these are the goals of Product Development.

Our main focus is on:

- Hydraulics
- Materials technology
- Automation and drives
- Digital Transformation



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## Corporate Social Responsibility **Committed to Action**

KSB is committed to the principles of the United Nations Global Compact corporate initiative which aims to bring about a higher level of social and economic justice.

Corporate social responsibility takes many forms for us. We are committed to supporting education for children and young people as well as to protecting the environment.



KSB Group  
**Our Corporate  
Culture**

Our internal cooperation and our contact with customers and partners is based on the values of

- Responsibility
- Trust
- Appreciation
- Professionalism
- Honesty



## KSB Group **Working at KSB**

We provide our employees with a sound working environment enabling them to support their customers with expertise and full commitment.

This means that we

- Pursue shared goals and recognise good performance
- Help to gain expertise and promote further training
- Work together with respect and dedication