

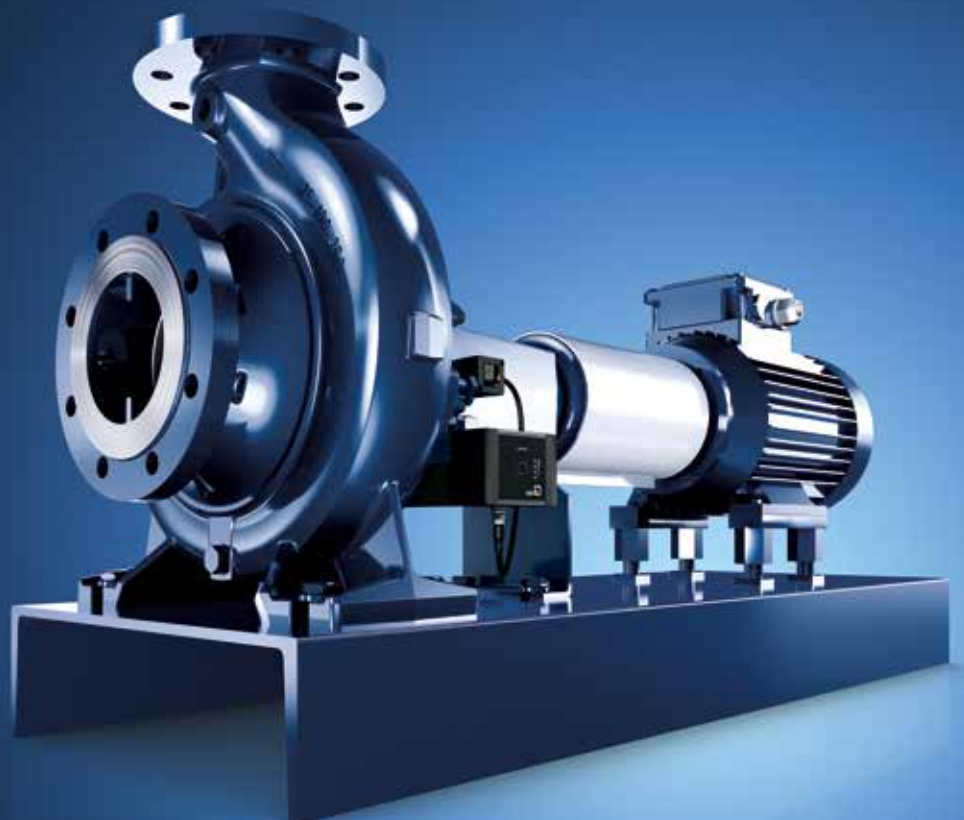
► Our technology. Your success.

Pumps • Valves • Service



KSB Guard. Ensures the availability of your system.

**MORE MONITORING.
LESS TROUBLE-
SHOOTING.**





Overview of system

1. KSB Guard sensor unit:

A vibration sensor and a temperature sensor record data directly at the pump.

2. KSB Guard transmission and battery unit:

Supplies power to the sensor unit and transfers measurement data to the gateway.

3. KSB Guard gateway:

Transfers data via the mobile phone network to the KSB Cloud while maintaining the highest security standards.

4. KSB Guard web portal and app:

Data and additional information on the pump can be evaluated conveniently and easily in the app or accessed via a computer.





Comprehensive monitoring of your pumps

On the one hand, a system should run smoothly. On the other, you want to minimise the outlay for inspecting and maintaining your system. With KSB Guard, both are possible! For the first time, we offer you the ability to gain an overview of the data on all of your pumps without having to be physically on site.

Reliable

KSB Guard monitors the status of your pumps hourly and notifies you immediately of any deviations. This allows you to fix problems before more substantial damage occurs.

Quick

KSB Guard saves resources starting with the installation, as the sensor unit is easy to install and pumps are quickly registered.

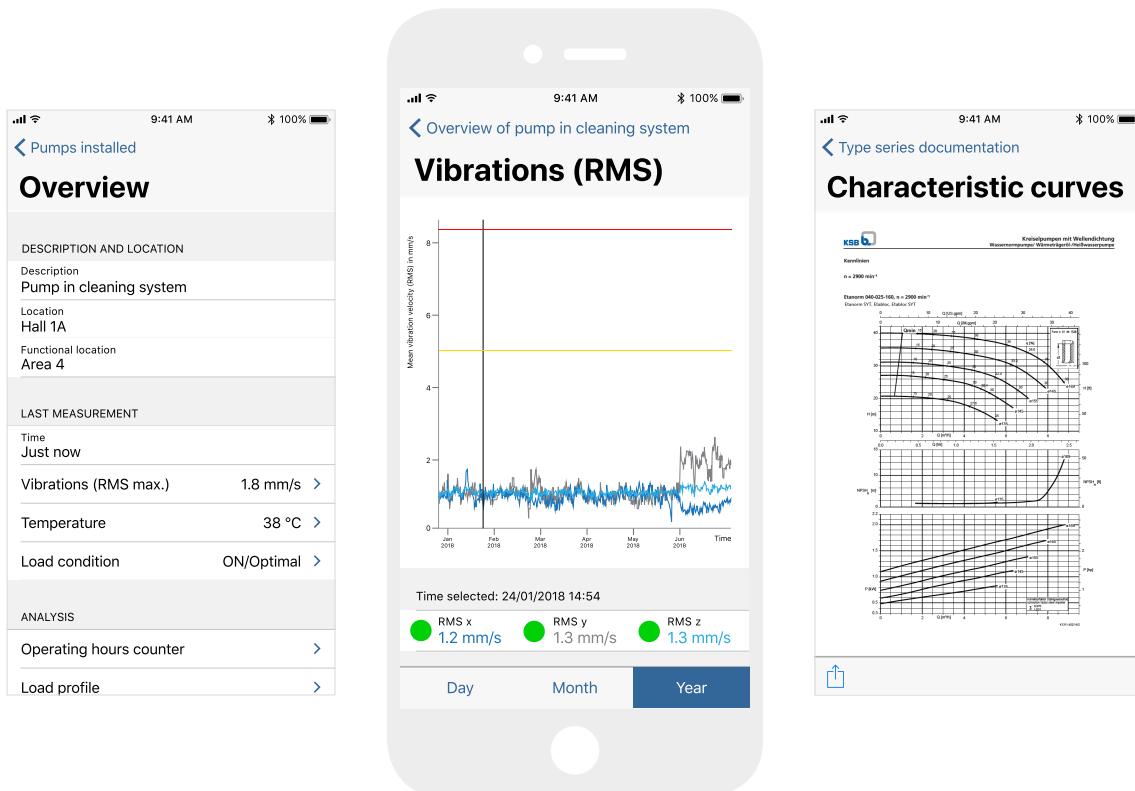
Straightforward

Specific status data helps you plan maintenance intervals. You also know sooner what to expect when performing maintenance work.

Access any time, anywhere

A busy schedule can make you pressed for time, and necessary inspections create additional stress. This is where KSB Guard comes in, by minimising the need to be physically present on-site to check the pumps. You can check the relevant status data at

any location whenever it is convenient for you. But that's not all! Whenever maintenance is required, you can also quickly and conveniently access all your pump data.



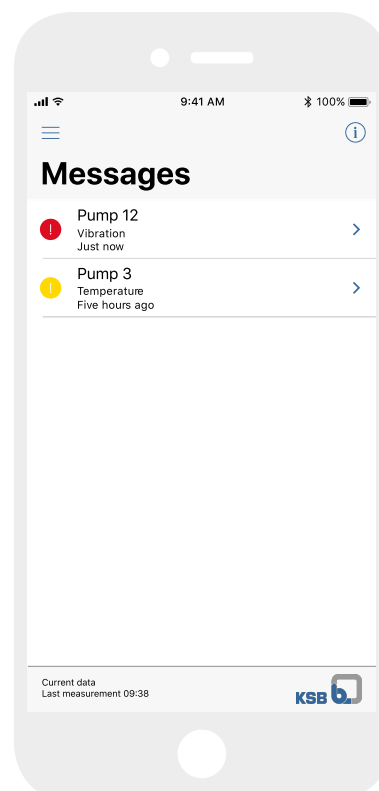
KSB Guard gives you access to:

- Pump documents such as operating manuals and exploded views
- Dynamic data updated hourly: Load conditions (for fixed speed pumps), vibrations and temperatures
- Chronological progressions of RMS values and temperatures
- Load profiles (for fixed speed pumps)

Detect changes early on to avoid malfunctions

If the failure of a pump compromises operation, maintenance is often scheduled at too short intervals, rather than longer ones. The problem with this approach, however, is that it takes resources as well as time. KSB Guard helps you resolve the problem with the anomaly detector, which measures vibration and temperature values at defined time intervals, records trends and warns you when preset or manually set limit values are exceeded. When it comes to vibrations, the mean vibration velocity, or RMS value, is analysed. The anomaly detector also notifies you when the bearing needs to be re-lubricated or replaced.

- Reports excessively high RMS values and incorrect temperatures as a warning or alarm
- Reminds you (if necessary) to lubricate or replace bearings
- Sends warnings and alarms as e-mails or push messages if so desired



Plan maintenance **efficiently**

KSB Guard allows you to plan for maintenance jobs based on specific measurement data. This, in turn, allows you to use your resources where they really are required. Documenting and tracking work on a pump takes just a few clicks, thereby preparing the ground for the next maintenance routine.

- Helps avoid unnecessary maintenance
- Improves availability as irregularities are detected
- Documents previous work to facilitate future inspections

Documentation	
INFORMATION DOCUMENTED	
Status	Maintenance performed
Component concerned	Coupling
Activity	Replacement
Comment	Coupling was defective.
Account	samsample@samplecompany.com
Time of documentation	22/02/2018 10:25:22

Maintenance history	
Time of documentation:	22/02/2018 10:25
Diagnosis:	Alarm
Type:	Vibration
Status:	Maintenance performed
Component concerned:	Coupling
Activity:	Replacement
Time of documentation:	19/01/2018 14:48
Diagnosis:	Warning
Type:	Bearing lubrication
Status:	Maintenance performed
Component concerned:	Pump-end pump bearing
Activity:	Lubrication



Ready for operation in a few steps

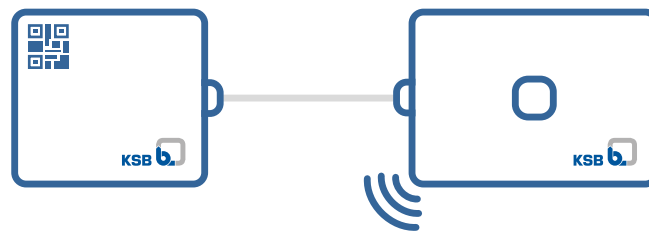
KSB Guard is designed to help you out. Right from the start. This is why we ensure that the installation is quick and easy and works for all pumps, regardless of their make. The sensor unit is not invasive, so that you can work during active operation. Simply attach the unit to the pump by magnet and industrial adhesive. As the system is battery powered, you do not need to route any additional cables or wires. All measurement data is transferred at the touch of a button. New pumps are then simply added using the app or computer. You can change the settings

directly online, such as the threshold from which you want to receive warnings.

- Installation during active operation possible
- No additional cables or wires necessary
- Manufacturer-neutral
- Simply add pumps online

Affix sensor unit

Affix the sensor unit to the bearing bracket or to the drive lantern of the pump using magnets and industrial adhesive to ensure good transmission of vibrations.

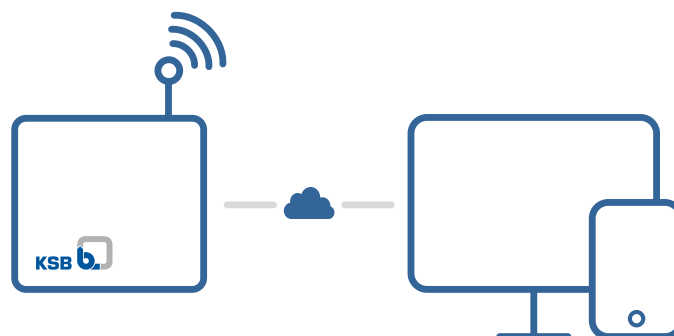


Mount transmission and battery unit

Mount the transmission and battery unit near the sensor unit wherever it is most convenient at the pump's place of installation. Then press a button to activate the transmission and battery unit and connect it with the sensor unit.

Hang up gateway

Hang up the gateway near the pumps, connect the plug to the 230 V mains and check mobile reception at the LED display.



Register pump

Make a few basic data entries for each pump on the computer or using your smartphone – done.



Technology that **makes its mark**

The KSB Newsletter –
don't miss out, sign up now:



Your local KSB representative:

Form area for entering local KSB representative information, consisting of two large empty rectangular boxes.



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