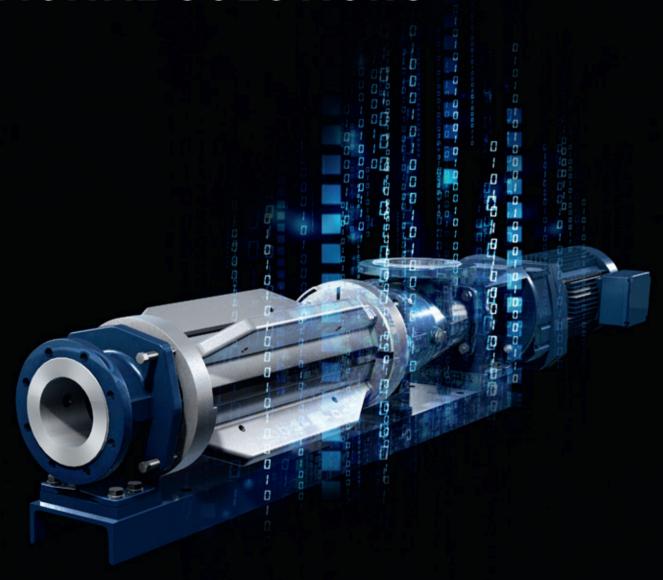


# DISCOVER THE POTENTIAL OF YOUR PUMP DIGITAL SOLUTIONS



DIGITAL SOLUTIONS 2

## THE POTENTIAL OF INTELLIGENT PUMPS.

SEEPEX presents the next digital evolutionary step for your pumps. It changes the way we deal with pumps and technology. With our solutions, we offer a clear overview of how the individual progressive cavity pump can be turned into a networked system of smart products, services and processes whose status and performance you can fully monitor in real time, from any location and at any time.

Take advantage of the benefits of digital transformation and significantly reduce your operating costs with SEEPEX Digital Solutions.

With SEEPEX Digital Solutions we merge the mechanical with the world of digital pumps. This is possible with reliable controlling systems, intelligent monitoring solutions and web-based services. Whether completely offline or connected online with our SEEPEX Connected Services - we have the right solution for you - which has been developed for the greatest possible flexibility and efficiency.

We work closely with our customers, using all of our acquired digital pump and application knowledge to provide them with efficiency-enhancing solutions that contribute to a safe and optimized production process.



DIGITAL SOLUTIONS 4 DIGITAL SOLUTIONS



## INDISPENSABLE. NETWORKED PUMPS.

We adapt our digital solutions and services to meet your needs and support you in optimizing the regular pump operation and conveying process, reducing unpredictable downtimes and process failures to a minimum, planning and carrying out necessary service and maintenance work more efficiently and simplifying logistics processes.

Use our Digital Solutions to

- increase plant availability and avoid unplanned downtime through continuous automated monitoring
- optimize service and maintenance intervals through predictive maintenance and thereby reduce maintenance costs
- optimize the use of your pump in terms of energy efficiency, throughput and service life and spare parts requirements
- analyze and improve demanding pumping tasks through the intelligent networking of your pumps
- retrieve all operationally relevant documents and maintenance plans for your pump online as a digital twin with the click of a mouse
- reach your contact person simply, quickly and directly for just-in-time ordering processes and service inquiries

We will help you to act in time instead of just reacting - with all relevant pump information always and everywhere in sight - with protection against unforeseeable failures.

We would be happy to discuss with you how you can utilize the full potential of our intelligent, networked pumps to the benefit of your applications.

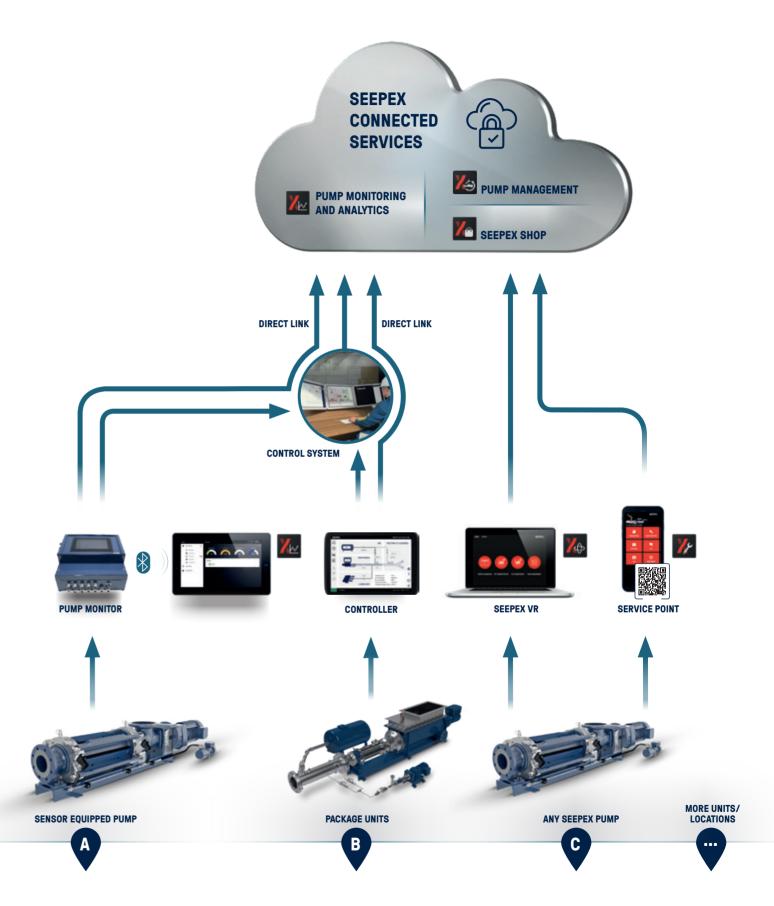
DIGITAL SOLUTIONS 6 DIGITAL SOLUTIONS

# AN OVERVIEW OF DIGITAL SOLUTIONS. PERFECT FOR EVERY REQUIREMENT.

Our Digital Solutions comprise of a whole portfolio of digital products and services – tailor-made to fit your digitalization strategy. We identify the challenges you face and work with you to find the best solution – tailored to your situation and application.

The SEEPEX Digital Solutions offer exactly the right thing for every user:

- For all users of digitalized pumps that are to be monitored and optimized. With the SEEPEX Pump Monitor and the appropriate sensors (item A), you can turn your pump into an intelligent field device. Your pump will be protected and monitored around the clock while everything is kept in view: whether locally in the control room and via Bluetooth or alternatively from any location in our cloud (SEEPEX Connected Services). With SEEPEX Pump Monitoring and Analytics, you will always have an overview of the status of all your pumps at any time, from any location even via messages to your mobile device if required. This allows the operation and maintenance of your pumps to be continuously analyzed and optimized.
- For all users of our control system solutions. With our application-specific SEEPEX control systems (item B), you will benefit from our expertise when it comes to the operation of a progressive cavity pump. Whether dosing or mixing, operating several pumps simultaneously or in highly complex conveying processes. Either entirely locally or in conjunction with our Connected Services.
- For all users of a conventional SEEPEX pump. Using the QR code (item C) in conjunction with SEEPEX Service Point and SEEPEX VR, you will always have all the maintenance information and procedures at your fingertips, you will be able to organize and plan them in SEEPEX Pump Management and order the necessary spare parts directly in the SEEPEX Shop. This service is completely free of charge and does not require the pump to be directly connected to the cloud.



8 PUMP MONITORING AND ANALYTICS 9



#### PUMP MONITORING AND ANALYTICS.

All of the operating data available at a glance at all times and in all places, early detection of wear and tear, prevention of process failures before they occur – regardless of whether the pump is located far away or poorly accessible and obstructed.

Make consistent decisions in rapidly changing processes.

SEEPEX Pump Monitoring impresses with its 100% reliability.

Receive information at an early stage before critical situations occur in your pump or in the surrounding process. Monitor your pump and detect possible wear, joint damage, cavitation, pipe blockages, drop in performance and flow rate or unplanned changes in process conditions such as temperature or pressure fluctuations in advance.

In short: Operate your pump at the optimal operating point, optimize service and maintenance work and noticeably increase system availability.

### THE PUMP MONITOR. THE INTELLIGENCE OF YOUR PUMP.

The SEEPEX Pump Monitor turns the progressive cavity pump into an intelligent field device that constantly monitors its own operating status and performance and immediately reports the results of this self-diagnosis to the user. With the utmost precision and reliability, it measures and records individually defined process values and machine data such as pressure, flow rate, temperature, vibration and drive data - 24 hours a day, 365 days a year. From this, relevant information and KPIs can be derived, such as a cavitation or wear indicator.

The Pump Monitor's intelligence, which is tailored to your application, guarantees the best possible use of your pump and also allows you to optionally activate a protective shutdown that will protect your pump from overpressure and excessive temperature. Stay informed and use the Pump Monitor locally via a display, via Bluetooth and integration into your control system.

PUMP MONITORING AND ANALYTICS 10

### PUMP MONITORING & ANALYTICS. THE COMPREHENSIVE SOLUTION IN THE CLOUD.

- Condition and performance monitoring of the pumps
- Extensive data evaluation
- Simple integration into process control systems
- Data available on smartphones or tablets

Even more extensive possibilities await you when you use our Pump Monitoring & Analytics offer as part of our SEEPEX Connected Services. Here you can expand the functions of the SEEPEX Pump Monitor and monitor all your SEEPEX pumps across plant boundaries and carry out even more extensive analyses - regardless of your location and at any time.

Whether you use the online comparison with the pump characteristic curve, activate pre-configured alarms or use our algorithms for anomaly detection - you will always have access to SEEPEX's expert knowledge and extensive database and can apply both to your application with precision.

A secure online connection, reliable data storage and the confidential handling of your data are our top priorities.

With SEEPEX Connected Services, we offer you options for condition and performance monitoring and extensive functions for data evaluation. This means that the pump performance is not only measurable, but can also be optimized. The degree of wear is displayed and upcoming maintenance can be planned in advance.

Integration into your existing process control systems is simple. Start-up, connection to the Pump Monitor and cloud connection can also be carried out by a SEEPEX specialist on request.

One thing is certain, you decide on your data and authorizations: locally offline or securely in our cloud.

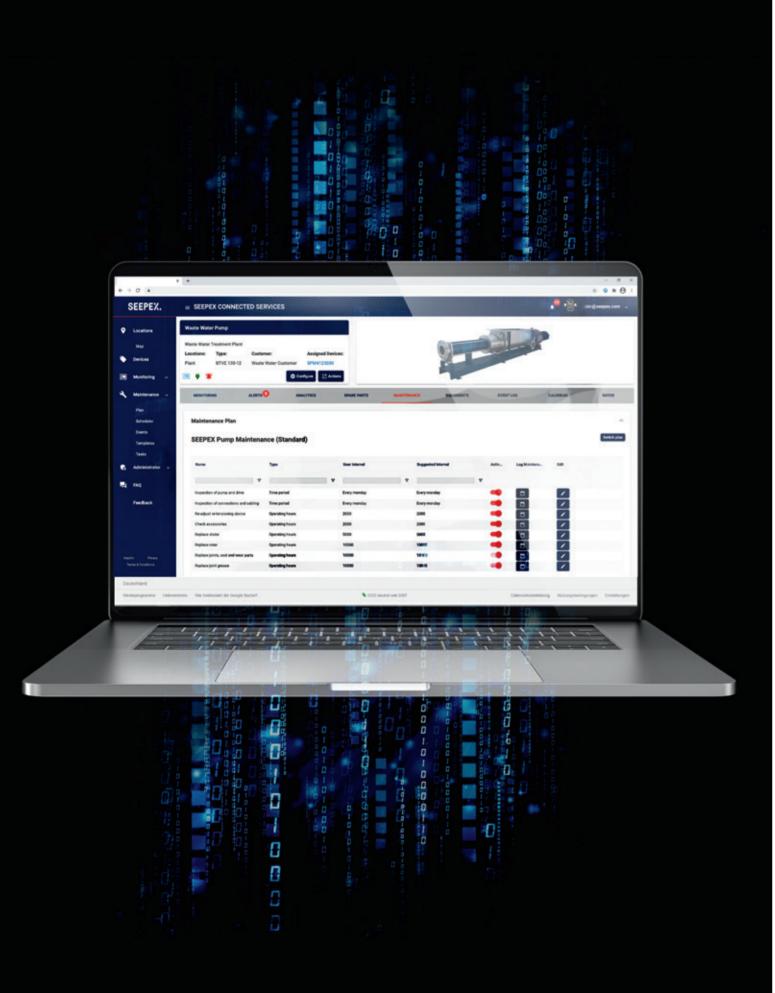
#### And incidentally:

All the data from the SEEPEX Pump Monitor is available quickly on your smartphone or tablet. This turns your smartphone into a pump control room on the go.



SEEPEX PUMP MANAGEMENT

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# SEEPEX PUMP MANAGEMENT. MANAGE YOUR PUMP CONVENIENTLY AND ELECTRONICALLY.

All the important technical information at your fingertips. Data sheets, manuals, 3D models and drawings. Spare parts list with link to the shop, management of documents and notes on the unit and digital maintenance planning. We offer the completely digital twin to your pump.

SEEPEX Pump Management gives you a comprehensive and convenient overview of your entire pump fleet:

- Access to the operating instructions, downloads for all available data sheets, dimensional and sectional drawings as well as 3D data for the respective pump.
- Create your own document file, save notes and images on the machine.
- The maintenance plan recommended by SEEPEX will be set up and adapted for you in no time at all. In future, you will be conveniently reminded of upcoming inspections via email.
- Keep track of your activities in the digital maintenance log. Have a full overview of the maintenance history of your pumps at all times.
- Anything else? Discuss your specific maintenance requirements with us.
   We can offer you advice and work with you to draw up an inspection plan according to your specifications.

SEEPEX PUMP MANAGEMENT 14

#### **SEEPEX SERVICE POINT.**PUMP MANAGEMENT FOR ON THE GO.

The key to efficient Pump Management is the QR code on the type plate of the pump. This allows pumps to be easily identified in your plant and, even without logging into Connected Services, you can obtain documentation and basic manufacturer information for the exact pump you have in front of you. Contact us directly for service or spare parts.

#### **SEEPEX VR AND REMOTE SERVICE.**MAINTENANCE BECOMES INTERACTIVE.

From practical experience for practical application: Detailed information on the pump, animated step-by-step instructions and interactive 3D animations are available with our mobile maintenance app SEEPEX VR. This makes maintenance uncomplicated and safe.

And with our Remote Assistance Service, we can provide you with live maintenance advice via video chat using augmented reality - whether on your smartphone or with smart glasses.

In the blink of an eye, a SEEPEX expert will be at your side virtually and provide you with assistance.

SEEPEX PUMP MANAGEMENT





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## E-COMMERCE. SHOPPING TOUR.

With our e-commerce solutions, you are in control of your orders at SEEPEX - from inquiry to delivery and beyond.

We provide you with optimal support. Whether it's a rotor, a stator, or a coupling rod: Buying original SEEPEX parts has never been easier or more convenient.

- Access the processing and delivery status of your current pump and spare parts orders at any time - right down to the tracking link!
- Overview of your complete order history with SEEPEX as well as your quotations being prepared by SEEPEX.
- Request complete spare parts quotations in seconds and forward them to the responsible departments in your company (e. g. to the central purchasing department). Or alternatively place orders directly from the SEEPEX Shop.
- Integrate our complete spare parts catalog into your ERP system with the OCI interface to optimize your stock management and have optimal control over your orders.

E-COMMERCE 1

Detailed information on these topics can be found on our website in the Download section and in the Digital category:

- Service Point
   Everything at a glance
- Easy Ordering SEEPEX Shop

### SEEPEX SERVICE POINT. THE SECURE SPARE PARTS INQUIRY WITHOUT HAVING TO LOG IN.

With the SEEPEX Service Point, spare parts requests can be generated conveniently even without logging in. Select from predefined packages for the most common maintenance cases or complete your inquiry from the items in the parts list. Scanning the unique QR code on the type plate of the pump will also ensure that the spare parts you inquire are an exact fit. If necessary, contact us directly from the app via chat or email.



### **SEEPEX SHOP.**A CONVENIENT OVERVIEW.

Our SEEPEX Shop is accessible from all platforms with a SEEPEX login - whether at your desk with a PC or in the field with a tablet or smartphone. Here you will find all spare parts for your progressive cavity pumps and important information such as parts lists, sectional drawings, prices and delivery times. No matter whether you order online, by phone or by email: In the shop you will always have an overview of all your orders including delivery status.

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PUMP CONTROL 20 PUMP CONTROL 21

# MONITORING AND CONTROLLING SYSTEMS. EVERYTHING UNDER CONTROL.

A control system solution is essential for the efficient operation of your progressive cavity pump. You are already aware that this control must be adapted to your specific conveying application in order to deliver the best results.

For this, a precise understanding of the progressive cavity pump is necessary: The best speed for the current process, adaptation to changing media and conveying capacities, the optimal filling level of the pump's own feed hoppers, accuracy in dosing applications, avoidance of unnecessary start-stop cycles, protection of the pump against dry running or overpressure.

These are just a few examples where our controlling systems and the expert knowledge they contain will help you achieve the best results, keep product quality consistently high and avoid production downtime.

Are you looking for controlling systems that can be adapted to your application, as your project is unique? Then SEEPEX has the solution for you:

- To monitor the operating conditions of the pump
- To optimally control the operation of the progressive cavity pump
- To protect the pump components

Detailed information on these products can be found in the brochures:

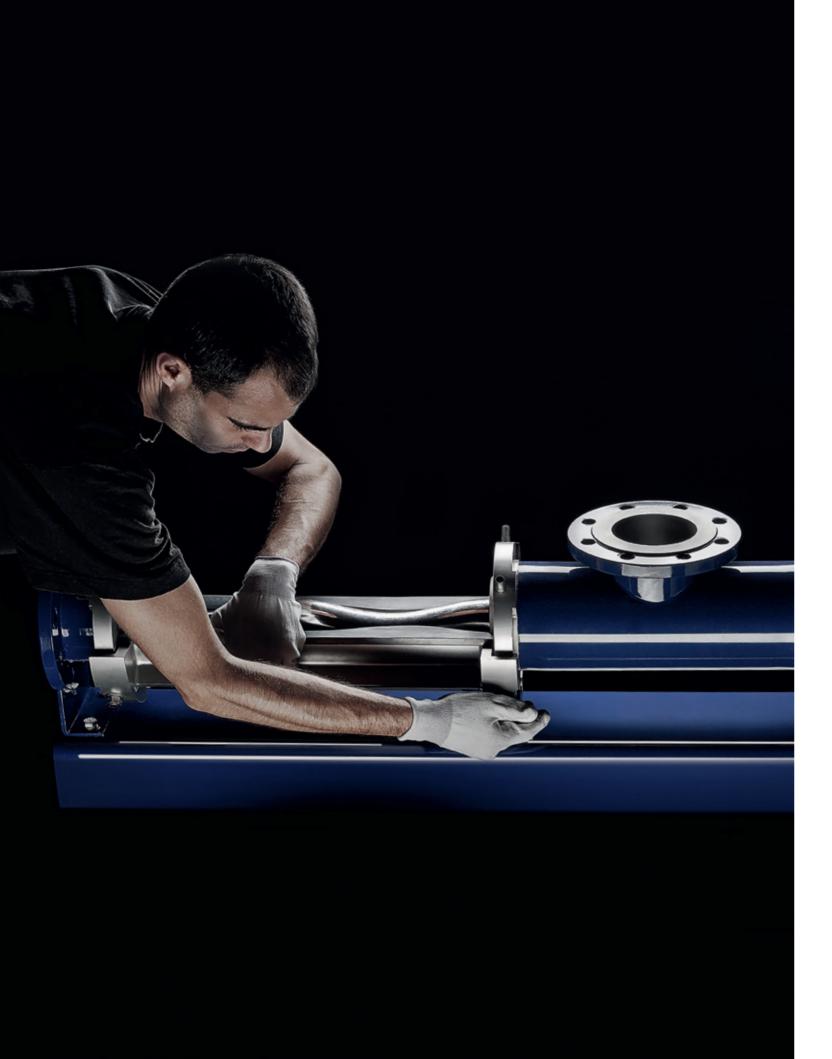
- Smart Air Injection (SAI)
- Smart Dosing Pump (SDP)
- Control Systems (CO)

With standardized control modules and package units, we offer reliable control, regulation and safe monitoring of your applications:

- For efficient transport over long distances of up to 1,000 meters using compressed air conveyance:
   Smart Air Injection
- For simple implementation of complex dosing and portioning processes in industrial environments and for laboratory applications:
   Smart Dosing Pump with integrated control
- For charging filter presses during sludge dewatering:
   Filter Press Pump Feeding
- For multiphase applications in the oil and gas industry:
   Multi Phase Pump Control
- For constant levels in pump hoppers or supply tanks in a wide range of industries and sectors:
   Level Control
- For dosing additives, e. g. in the food, pharmaceutical and cosmetics industries:
   Dosing Control

Naturally, we also offer custom control system solutions – from individual components to complex systems complete with process visualization. Whether standardized or customer-specific: We are your competent partner from development to start-up.





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## WHERE ARE WE GOING? FORWARD INTO A SMARTER FUTURE.

SEEPEX is a global market leader in progressive cavity pumps, pump systems and related digital solutions and services. Our experts develop excellent, reliable, innovative and cost-effective solutions that optimize our customers' systems, increase their productivity and reduce their operating costs.

Our guarantee: By precisely adapting the pumps to the customer's application, we can achieve the best possible technical and economical results. Our technology enables our customers to promote a clean environment, product safety, quality and the sustainable use of resources.

With SEEPEX all things flow. Our pumps convey even the most difficult products — without limits and to the exact drop: whether it is sensitive foodstuff, chemically aggressive liquids or materials with a high solid or fiber content. As a leading digital pioneer in the progressive cavity pump market with the most advanced digital portfolio, we know what it takes to optimize the Total Cost of Ownership. Our research and innovation teams are based in Germany and the USA, while our production facilities are located in Germany, the USA and China.

By pooling our production expertise and market knowledge worldwide, we can react more quickly and respond individually to our customers' wishes. Our global sales and service network ensures we build and maintain close relationships with our customers and provide excellent service. How can we help your company flow?



#### **SEEPEX GmbH**

www.seepex.com