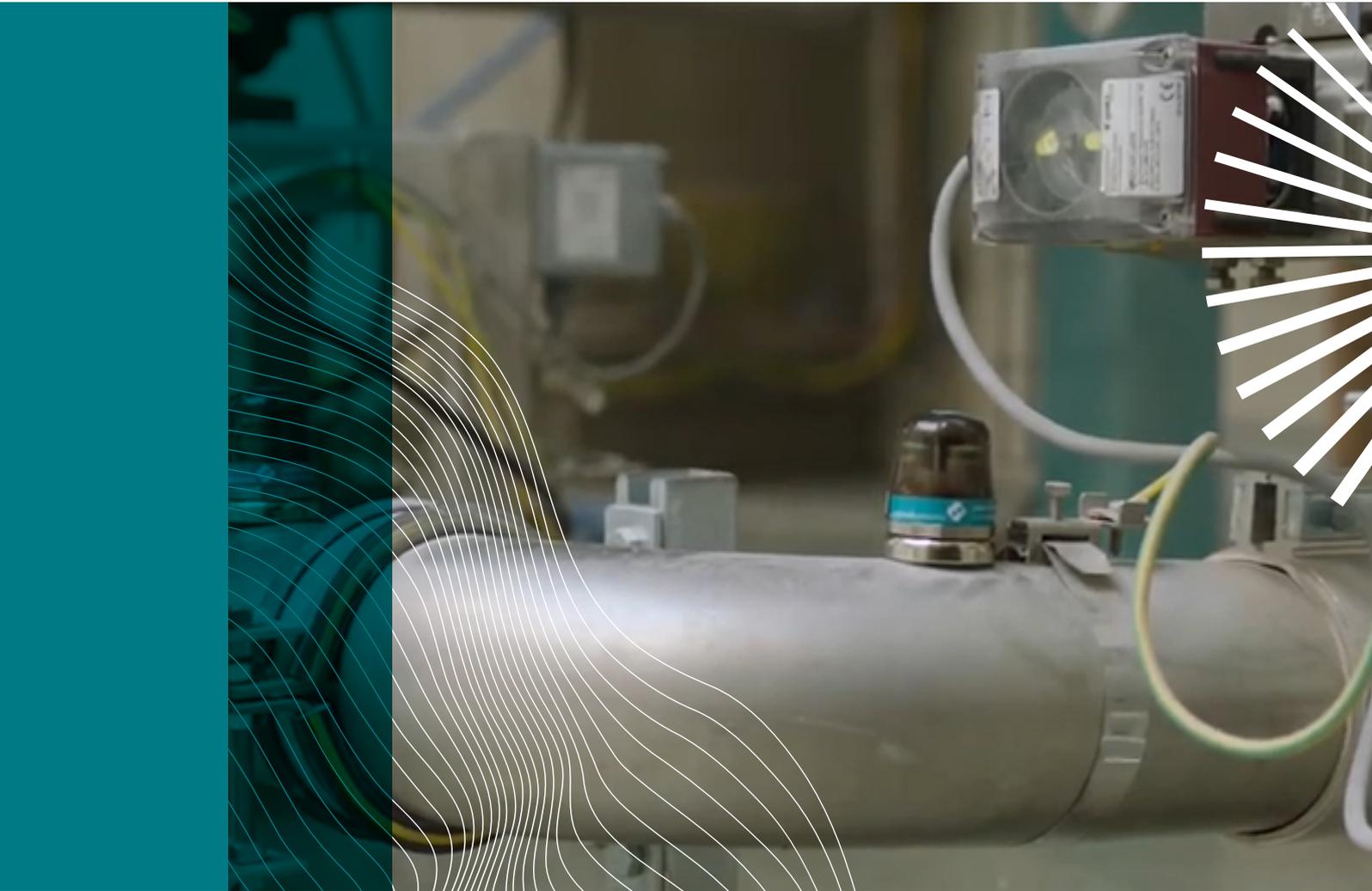# **CONiQ** Cloud:
the backbone of our digital eco-system

Optimizing machine maintenance and process performance
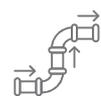
Turn information into invaluable insights.

The **CONiQ®** Cloud is the IoT backbone to make your machines and processes smarter. It is designed for you to access data from your assets and offers various benefits from simple monitoring and transparency to ad-hoc service expert support on immediate and historic machine issues.

In addition, the **CONiQ®** Cloud also includes easy-to-use dashboards with KPI information directly on your mobile device, so you have all relevant information with you – any time, any place.

Thanks to the global setup, your need for support on data interpretation, recommendation for action and constant improvement is just one click away. Thus, you can get complementary support on all level around the data of your assets to support your operation and maintenance team.

Maximize Performance

Minimize Maintenance Costs

Maximize Uptime

Protect your most valuable assets

One step ahead with **CONiQ® Cloud**

The **CONiQ®** Cloud is a cloud-based IoT solution designed to access data from machine assets and processes. The cloud solution builds the foundation for all digital services of Schenck Process and offers customers powerful tools for data-driven maintenance and performance optimization. An integrated knowledge base further empowers experts to monitor OEM equipment remotely in real-time and to respond timely in case of a process-critical event.

The **CONiQ®** Cloud turns data from various sources such as **CONiQ®** Monitor into valuable information which the customer can use to:

• Indicate problems before they become a failure
• Detect issues early to gain more reaction time
• Avoid unplanned downtime
• Plan maintenance effectively and in advance
• Minimize maintenance costs
• Ensure an efficient and effective machine operation
• Minimize waste of ressources

Our **CONiQ®** solutions are constantly evolving and cover a wide and growing range of Digital Monitoring tools and services. Stay informed and visit our website and the relevant product documentation.

schenckprocess.com

Introducing
CONiQ® Monitor

CONiQ® Monitor is the new IoT edge system and add-on hardware for Schenck Process equipment. The system contains a variety of sensors, performs edge data processing and deals as a gateway into the **CONiQ®** Cloud and customer control systems.

CONiQ® Monitor enables a high level of flexibility in relation to sensor connection, on-site analytics and communication interfaces. With this flexibility, **CONiQ®** Monitor can be adapted to any kind of process equipment and existing **CONiQ®** Monitor system can be adapted over time to emerging needs and ideas. The system can even be updated while being installed on-site and while the equipment is in operation.

To ensure a high-end level of usability, **CONiQ®** Monitor is designed to be a plug & play system. Once the hardware is supplied with power it automatically receives SW updates from the **CONiQ®** Cloud and switches to 24/7 monitoring providing real-time data for customer control systems and the **CONiQ®** Cloud.

As first application, Condition and Process Monitoring of our machines is implemented on the **CONiQ®** Cloud platform. **CONiQ®** Monitor includes numerous wireless and three-dimensional motion sensors which are distributed to critical positions around the machine. As a special feature these motion sensors are fully synchronized despite being wireless.

WHAT ARE KEY BENEFITS OF THE CONIQ® CLOUD

- Enabler for next-level Digital Services

- Smart analytics based on Schenck Process domain expertise

- Adaptive solution even for special process equipment

- Powerful and growing platform to share apps and feature for all domains

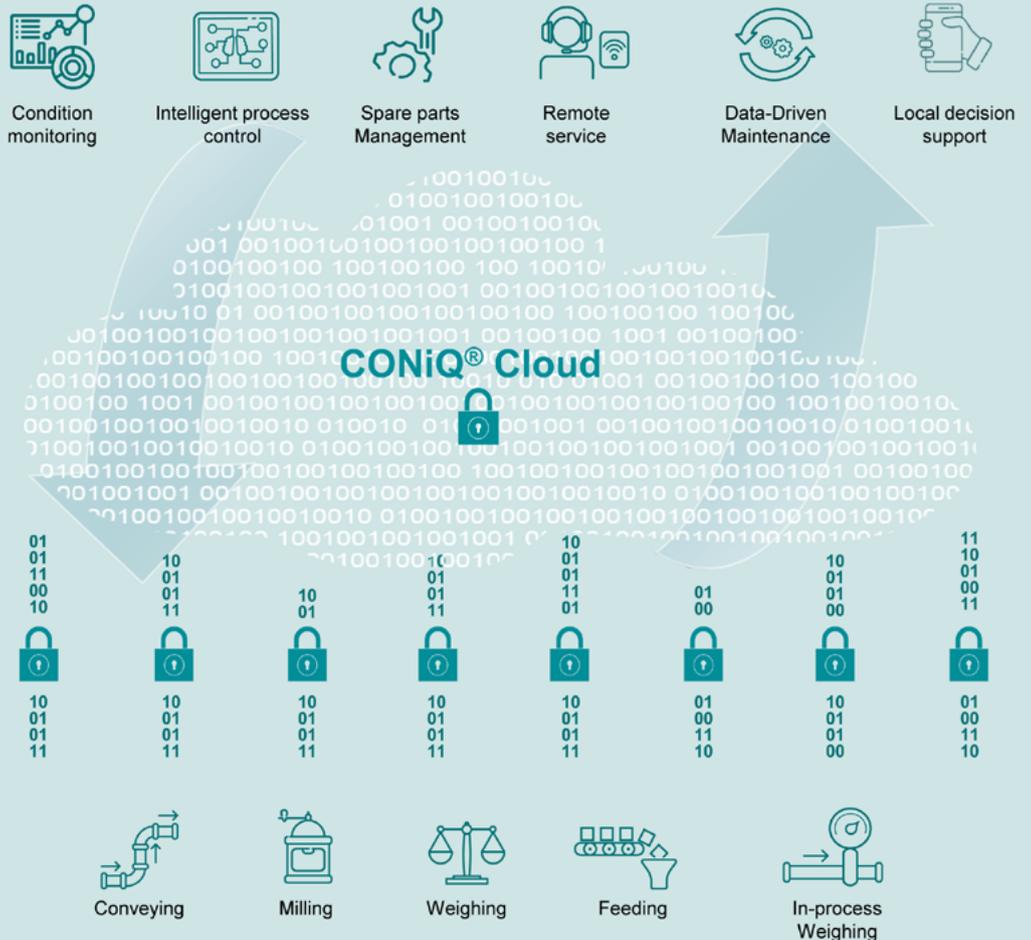- Open architecture to connect CONiQ® Cloud with ambient IoT systems

Digital Services
Developed by SPG and selected partners

Condition monitoring · Intelligent process control · Spare parts Management · Remote service · Data-Driven Maintenance · Local decision support

CONiQ® Cloud
Providing secure data storage and analytics, billing & metering, …

CONiQ® Cloud

CONiQ® Monitor
Secure plug&play connection of process relevant products – using wireless sensors and standard interfaces

Conveying · Milling · Weighing · Feeding · In-process Weighing

Security is a top priority – both on site and digitally

CONiQ® Cloud acts like a virtual bridge between our machines and our digital services.

Thanks to a secure plug&play connection between process relevant products (using wireless sensors) and standard interfaces, data is encrypted and transmitted to CONiQ® Cloud in accordance with latest security standards.

In a next step, CONiQ® Cloud enables secure data storage and analytics, billing and metering.

NEXT LEVEL DIGITAL SERVICE

Our customers' valuable data from the CONiQ® Cloud serves as the basis for our digital services, for example remote service, intelligent process control and spare parts management.

Intelligent algorithms enable even faster and more accurate services going forward and thus attractive offers for the future success of you, our customers.

Smart analytics provided by the OEM experts.

Based on our knowledge about our machines and customer processes, we benefit from the insights we have on normal operation. With the long tradition on machine and process testing, we can predict with high precision how customer machines will behave in nearly any given operation regime and environmental condition.

The service comprises a data driven model, predicting normal behaviour based on historical data and current machine and process operation. In contrast to the normal condition monitoring against given absolute alarm limits, our approach focuses on the difference between measured and predicted value – the so-called residual value. This value reflects the degree of deviation from normal operation and is more sensitive to any kind of changes. Combining latest machine learning technologies with our machine and process knowledge, we are able to make deeper use of the information hidden in traditional machine and process measurements. Finally we are able to identify deviation form normal machine and process operation long before traditional alarm limits go off.
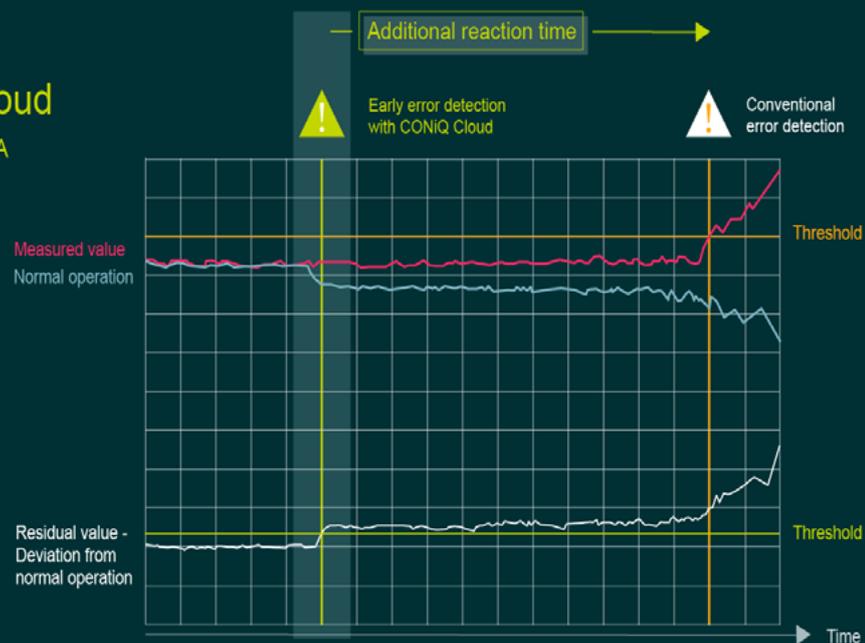
Our latest digital services do not only secure safe and efficient operation but enlarge the reaction time for our customers to think about appropriate measure - long before failures become a problem."
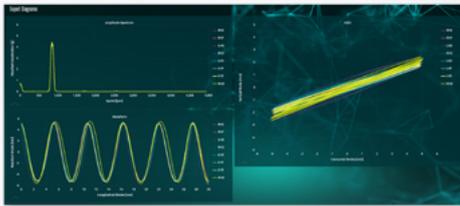
Deviation from normal operation - provides time

schenck process

Win reaction time through early fault detection:

Additional reaction time

CONiQ® Cloud
iQ YOUR DATA

⚠ Early error detection with CONiQ Cloud

⚠ Conventional error detection

Measured value
Normal operation

Threshold

Residual value -
Deviation from
normal operation

Threshold

Time

- » **Easy and quick access to all relevant machine information**

- » **Domain specific expert graphs and illustrations**

- » **Threshold illustration in trend diagrams**

- » **Customizable E-Mail alerts**

- » **Privacy and access protection**

- » **Responsive Webdesign**

- » **Auto-adapting time zone**

Performance at a glance
The **CONiQ**® Cloud Dashboard.

The Dashboard enables easy and quick access to all relevant machine KPIs – accessible from any location and any device with an internet connection.

The backend architecture of **CONiQ**® Cloud ensures, that all users can work with their private data, while being protected from unauthorized access.

A full responsive web design enables all panels to adapt to screen size and resolution as well as smooth interaction (e. g. zoom) with both mouse and touch. The time zone will automatically adapt to the client system.

A high usability requires a quick assessment of whether a machine is operating within or outside its tolerance bands. That's why all information is translated into easy to understand graphical illustration of thresholds in trend diagrams.

In addition, a machine-learning based anomaly detector highlights deviation from normal signal patterns. If desired email alerts can be activated. As soon as an anomaly is detected, the system sends a warning mail with condensed relevant information to operation and maintenance staff.

Get in touch with us today.

By combining a state-of-the-art cloud service with our experience and technical know-how, Schenck Process will help you to maintain long-lasting performance of your machinery and to resolve any issues identified. Our refurbishment service completes comprehensive offering that provides you with total peace of mind.

Get in touch with your Schenck Process representative for advice on condition monitoring, fault resolution and refurbishment.

Visit Schenck Process NEXT to learn more about our innovative products and join us on our digital journey.

Connect!

schenck process

Schenck Process Europe GmbH
Pallaswiesenstr. 100
64293 Darmstadt, Germany
T +49 61 51-15 31 0
sales@schenckprocess.com
www.schenckprocess.com

we make processes work