Know what is going on. Yesterday, today and tomorrow.



technology that inspires

The innovative cloud solution optimizes production planning, machine availability, documentation, and connectivity with higher-level control structures. Ecoclean Connect thus supports improved productivity and competitiveness.

The ongoing digitalization and networking of manufacturing processes is changing the face of production. The goals of Industry 4.0 are to optimize operational effectiveness, create better competitive conditions and promote growth to ensure the future viability of companies. Developments in this field are also posing new challenges for industrial parts cleaning. One of them is to ensure that the data obtained by the permanent, state-of-the art capture, monitoring and documentation of diverse equipment parameters such as, e.g.,

pressures, temperatures, power consumption and operating hours, can be intelligently used. We have developed the innovative cloud solution Ecoclean Connect with this in mind. Defined data generated by the machine's control system is transmitted via a secure connection to the cloud and stored, evaluated and intelligently combined using the latest technologies and infrastructures. To enable comprehensive fleet management, several cleaning systems can be integrated.

ECOCLEANConnect

) For visualization, the information is presented in dashboard form on a desktop computer or table



- + Condition Monitoring: Acquisition of process and production data, including history
- Documentation: Obligation to provide proof and documentation to your customers
- + Production Planning: Utilization planning or production planning for current and future customer orders
- Predictive Maintenance: Planning maintenance work and preventive measures
- Connectivity: Standard interface for networking with higher-level control structures

Prepared for any challenge. Targeted, fast and convenient.

Higher degree of automation, fewer manual processes and touch points

Shorter delivery times and the rising trend towards customized projects are a relevant and challenging issue. For a long time, the technical development of all machines required for production was considered to be the only and most important lever to meet these challenges. To take full advantage of a machine's speed, adapted processes are called for. Ecoclean Connect helps you reduce laborious, manual processes and touch points to increase speed and productivity.

YOU ARE...

DO YOU WANT TO...



...design your production process efficiently and reliably? Ecoclean Connect shows you...

- how well your machine is being utilized
- when is the best time to schedule downtime and maintenance work
- your machine's processing times
- how to ensure process quality
- how you can be assisted even faster and more efficiently by our Service people



...monitor the condition of a machine at all times? Ecoclean Connect shows you...

- when is the best time to schedule downtime and maintenance work
- which spare parts you need
- when you need to call in external specialists
- how to achieve continuous and complete documentation
- how you can be assisted even faster and more efficiently by our Service people



...ensure and optimize process quality?

Ecoclean Connect shows you...

- how to identify errors in the process
- how to detect anomalies at an early stage
- how to ensure your process quality
- how to achieve continuous and complete documentation through detailed cleaning reports



...ensure a trouble-free and efficient process?

Ecoclean Connect shows you...

- the effectiveness of your machine
- how your machine is configured
- how to detect anomalies at an early stage
- how to carry out detailed data analysis
- how to ensure the process times and process quality of your machine

 2

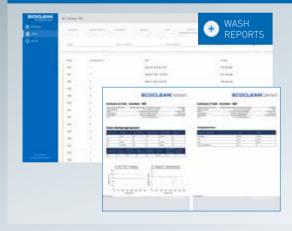
Individually and tailored to your needs. In a clear and simple way.

CONDITION MONITORING



- Machine status via online data
- Process visualization including preselections and step sequence display
- Operating data history
- KPIs such as OEE, utilization, effectiveness
- Message archive and message statistics

DOCUMENTATION & REPORTING



- Overview of all executed cleaning processes
- Single reports for cleaning processes including process parameters
- Cleaning program management with version history and reporting
- Library for all important documents around the attachment
- Timeline for important events

PREDICTIVE MAINTENANCE



- Machine status at any chosen time in the future
- Targeted maintenance forecast for pumps, heaters, butterfly valves and filters
- Maintenance recommendations for drawing up maintenance plans
- Automated maintenance instructions





PRODUCTION PLANNING



- OEE, availability, utilization
- Overview of runtime and throughput
- Monitoring of all machines in the system independent of time and place (fleet management)
- Message statistics

CONNECTIVITY



- Connection to higher-level control structures via common interface protocols
- Optimized interface with Ecoclean Service
- Automatic email notification service

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Ecoclean Connect Live.

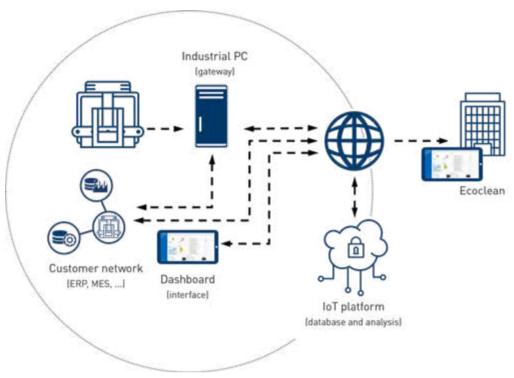
Would you like to learn more about Ecoclean Connect? Our **free demonstration** gives you a first impression of how you can increase your productivity and strengthen your competitiveness.

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Safety first. Always and everywhere.

Architecture

- The Industrial PC collects information from the controller of the cleaning machine (PLC) and sends it as filtered, anonymized and encrypted data to the IoT platform.
- The loT platform is used to store, process, and analyze the data and also provides standard interfaces for higher-level control structures.
- After processing and analysis, the Ecoclean Connect
 Dashboard displays the collected data in raw format,
 as well as additional calculated data stored on the IoT
 platform in a user-friendly format.



Data privacy

Transparency is very important to us. In Ecoclean Connect, you can view all the data transferred from your machine to the IoT platform. You can restrict the transmission of specific data as desired.

We and our partners use the infrastructure of Microsoft Corporation's West Europe Data Center located in the Netherlands. This Data Center is certified according to ISO 27001, ISO 9001, ISO 27017 (...), among others

Your data will always be transmitted from the Industrial PC to the IoT platform in anonymous and encrypted form [MQTT, TLS encrypted via port 8883]. Personal data is processed in compliance with the provisions of the German Data Protection Regulation [DSGVO].

"We don't follow trends just for the sake of it - efficiency, and thus profitability and resource conservation, are simply economic and ecological aspects which we as a company are also forced to consider. With all its features, Ecoclean Connect stands for improved productivity and thus competitiveness"

Andreas Wacker, Plant Manager Wacker Qualitätssicherung GmbH

Ecoclean Connect Live.

Would you like to learn more about Ecoclean Connect?
Our **free demonstration** gives you a first impression of how you can increase your productivity and strengthen your competitiveness.

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Our Locations Worldwide



Ecoclean Connect Live.

Would you like to try out Ecoclean Connect without obligation? Our **free demonstration** gives you a first impression of how you can increase your productivity and strengthen your competitiveness. **Make an appointment now:** via our website or by e-mail to connect@ecoclean-group.net. We're looking forward to hearing from you!



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