



OPTIMIZE EFFICIENCY AND MAXIMIZE YOUR PROFIT

**Metris addIQ control system
for filter presses**

Intelligence for machine and process control



With Metris addIQ, you have a well-proven, intelligent control solution for industrial processes and machines. Our solid/liquid separation specialists use their in-depth expertise to provide scalable solutions that are individually tailored to regional and application requirements. Whether you're automating new equipment or upgrading to extend the lifecycle of existing systems, we find the ideal solution for you.

METRIS addIQ CONTROL SYSTEMS

Our tailored turnkey systems from a single supplier can improve entire plants or individual machines. By providing state-of-the-art automation technologies and digitalization, we ensure best-in-class performance. Automating machine and plant equipment measurably reduces gaps in many different production process steps. By using automation from ANDRITZ, you can reduce downtime thanks to features such as predictive analysis that allow you to optimize productivity.

Metris addIQ control system covers all levels of automation, starting at basic automation (machine, process, and plant control), to upgrades, and add-ons for process optimization. Together, you have a full range of optimized solutions that help reduce maintenance efforts and ensure preventive service for your machines and plants. These are all delivered from a single source and always individually tailored to your business demands.

METRIS - THE ANDRITZ BRAND FOR DIGITAL SOLUTIONS

Under the brand name Metris, ANDRITZ offers a broad and growing range of innovative products and services in the field of industrial digitalization. They help customers increase plant efficiency and profitability, optimize resource use, achieve consistent product quality, reduce production downtime, and maximize user-friendliness.

GET AN OVERVIEW

Metris addIQ
control systems



Make your filter press ready for the future

Our mission is to enable our customers to achieve their targets in terms of overall equipment efficiency, minimum production costs, transparency, and short training periods – all necessary to give our customers peace of mind. This is particularly important in the highly competitive markets in which our customers operate – be it the food, mining and minerals, environmental or chemical industries. And these industries are facing a new challenge: the Fourth Industrial Revolution, based on the use of cyber-physical systems. This is what drives us in our continuous R&D efforts to develop both state-of-the-art and future-focused filter press technologies.

YOUR TRUSTED PARTNER FOR FILTER PRESS TECHNOLOGY IN THE PAST AND IN THE FUTURE

We can look back on more than 150 years of experience with over 20,000 filter press installations worldwide – a track record that not only underlines our status as a global separation specialist, but also as a strong

partner for a wide range of customers in different industries. Our references underpin our vast experience and the trust our customers put in our know-how. Extensive experience paired with innovation – ANDRITZ is your key to digitalization.



Metris addIQ expansion stages to meet your needs

Metris addIQ control system for filter presses is available in three different stages of expansion: addIQ Dynamic, addIQ Prime, and addIQ Flex.

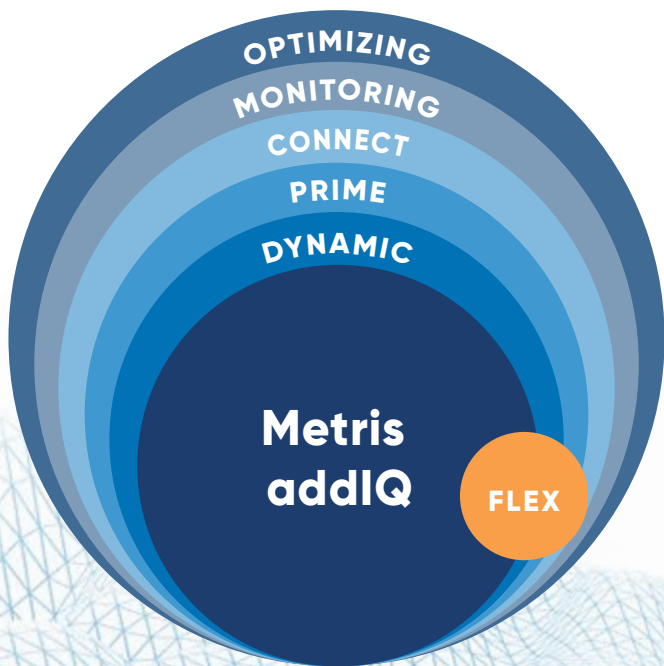
METRIS addIQ CONTROL SYSTEM FOR FILTER PRESSES

Metris addIQ control system for filter presses combines all our extensive operation and start-up experience in one tailored automation solution. It is a unique ANDRITZ automation product to maximize your machine performance. Metris addIQ control system for filter presses is available in different packages according to individual needs. Naturally, the system can also be retrofitted to existing filter presses.

EX PROOF

An explosion-proof version of the Metris addIQ control system for filter presses is also available. It is the ideal option for processes that meet hazardous area classification requirements.

FEATURES	DYNAMIC	PRIME	FLEX
Specific machine control functions	x	x	Customized solution to meet specific customer mill standard
HMI panel for monitoring and parameter setup	10" touchscreen with upscale possibility	15" touchscreen	
Easy integration into overall control systems	x	x	
Ready for future functional updates	x	x	
Basic trending functions	x	x	
Monitoring and control of machine and machine auxiliaries	x	x	
High-end trending, optimization and diagnostic functions		x	
Metris addIQ Connect	included	included	
Metris addIQ Monitoring	Option	included	
Metris addIQ Optimizing	Option	Option	



GET AN OVERVIEW

Metris addIQ control system for filter presses

Metris addIQ options to step into IIoT solutions

Based on your chosen Metris addIQ control system, you can add further options to get even closer to a digitalized process.

METRIS addIQ CONNECT

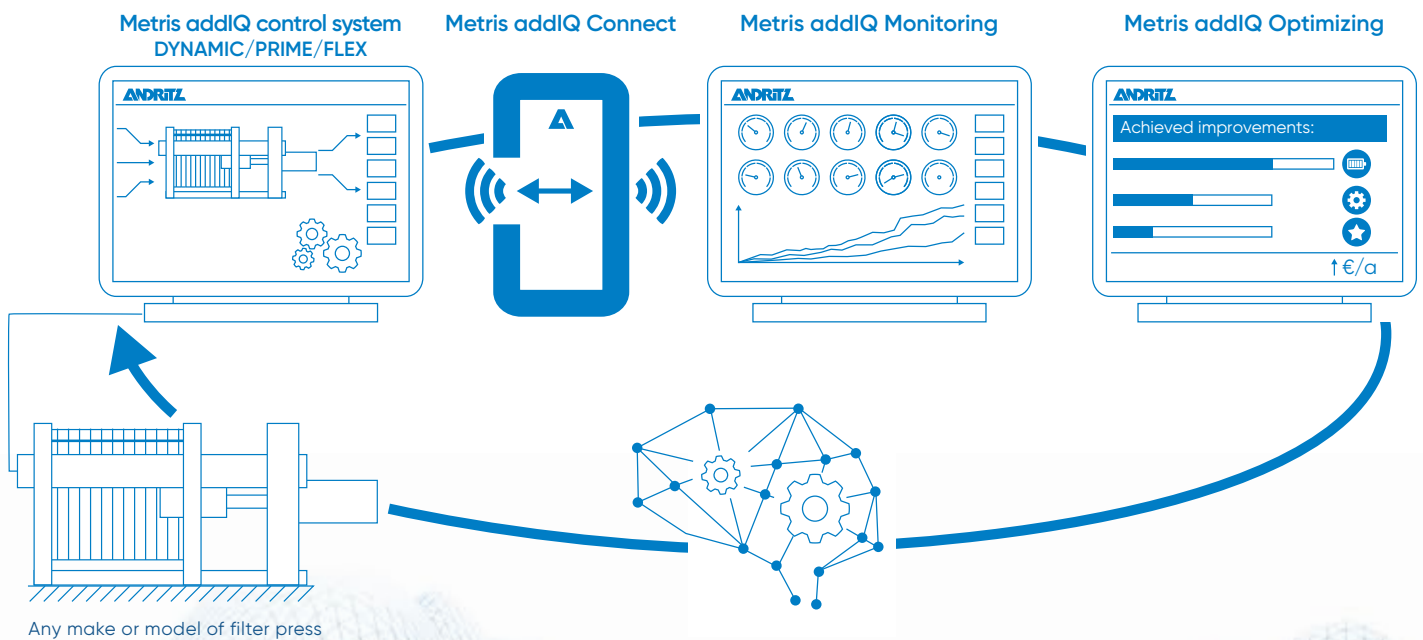
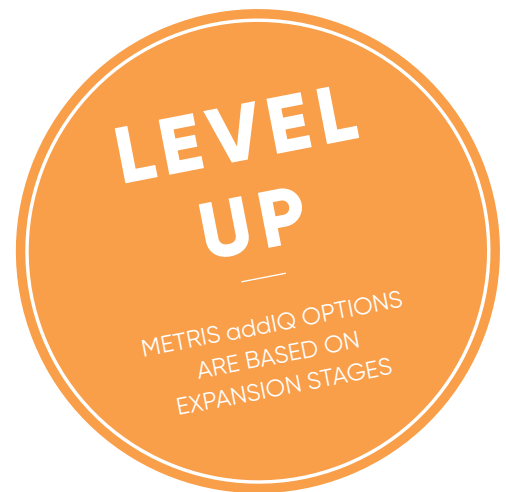
Metris addIQ Connect integrates your filter press into the secure ANDRITZ environment, enabling remote support and fast interaction between your machine and ANDRITZ specialists.

METRIS addIQ MONITORING

Metris addIQ Monitoring is a real-time tracking tool that allows you to monitor the operating status of your machine 24/7 from anywhere in the world.

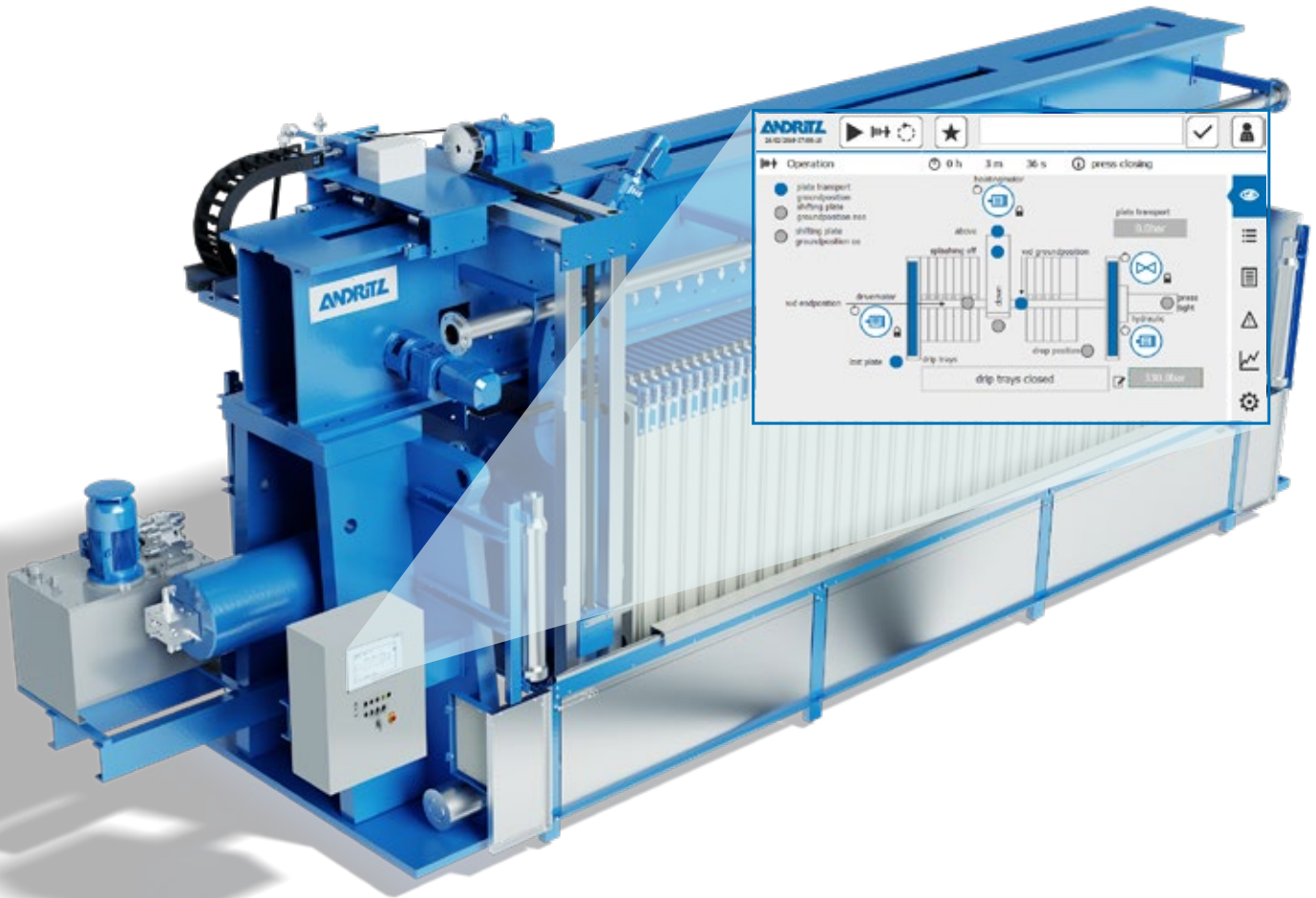
METRIS addIQ OPTIMIZING

Metris addIQ Optimizing is an analysis tool that ensures your machine performs at its best. Combined with the expertise of ANDRITZ specialists, it reveals opportunities for you to save money, and stabilize and increase the production of your equipment.



Standard tool set tailored to your specific needs

**INSTALL METRIS
addIQ CONTROL
SYSTEM ON YOUR NEW
FILTER PRESS OR
UPGRADE YOUR
EXISTING ONE**



Benefits

- Easy integration and short start-up time in existing or new systems
- Increased total production due to less downtime
- Higher plant availability
- Improved process stability
- Short response times via remote support
- Personalized reports
- Door opener for all future IIoT solutions

Additional functions that can be included in your Metris addIQ control system

With your Metris addIQ control system, you can not only interact with the different operating modes of your filter press, but also access a wide range of other functions and tools that will sustainably improve your process.

Filter press automation solutions

PLATE SHIFTER

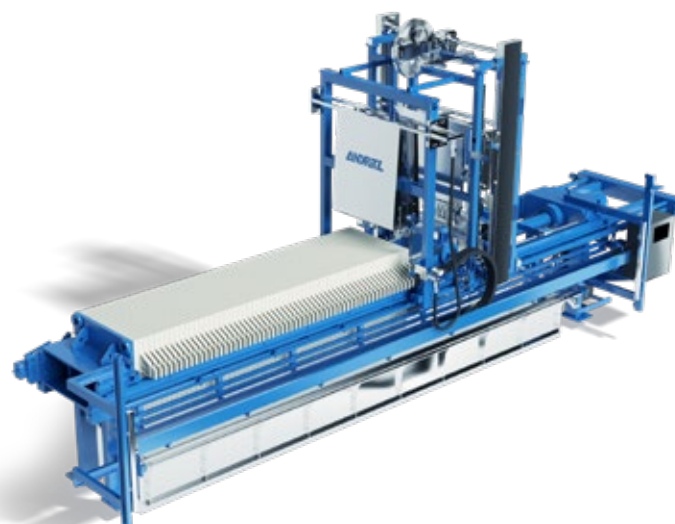
For faster filter cake discharge, the speed of the plate shifter can be adjusted in both overhead and sidebar filter presses.

DRIP TRAYS

The drip trays are moved by means of hydraulic cylinders, which are controlled by Metris addIQ. It ensures that the drip trays are in the open position for cake discharge and in the closed position during filtration so that the filtrate is kept separate from any containers or the conveyor system.

SCRAPER AND FILTER CLOTH WASHING DEVICE

More operating convenience because sticky filter cakes are discharged automatically and filter cloths are subsequently cleaned.



Sidebar filter press with filter cloth washing device

Peripheral equipment automation solutions

FILTER PRESS FEEDING SYSTEM

The filter press feed is controlled continuously by pressure feeding and a flow meter in order to obtain the optimum filling level of the filter press.

SQUEEZING SYSTEM

Best possible dewatering is achieved by means of an optimized membrane squeezing system.

CONVEYING SYSTEM

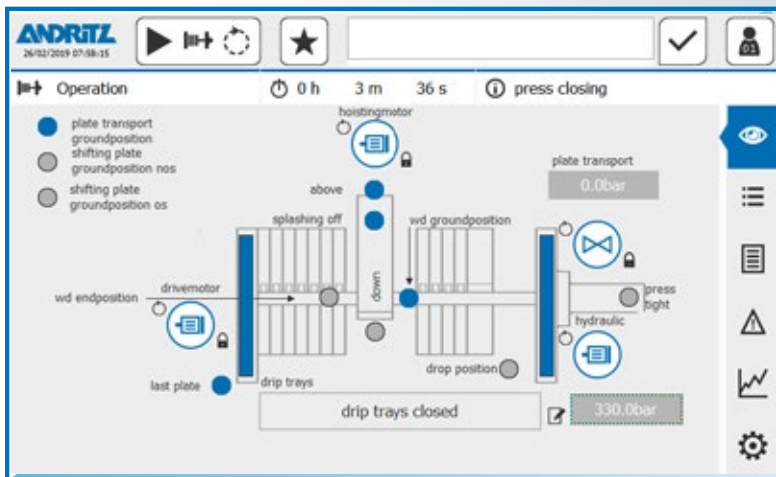
Controlled, fully automatic conveying systems for efficient filter cake discharge.

FILTER CAKE WASHING DEVICES

Sequences preconfigured in order to achieve optimum washing results.

Want to get ready for the future?

Your upgrade to Metris addIQ control system is just the beginning!

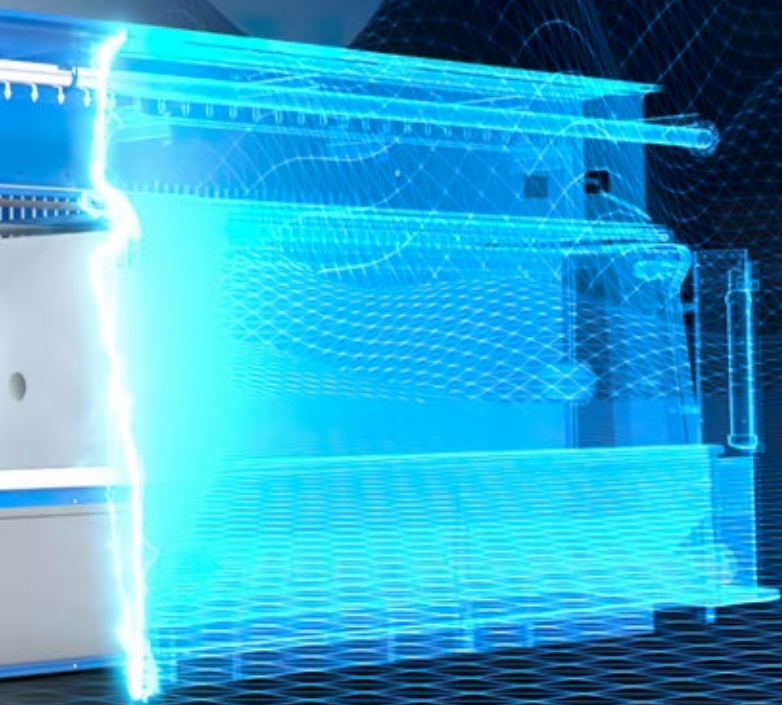


Unlock the full potential of digitalization with the intelligent filter press

Let's go one step further into the future

ANDRITZ has combined its proven filter press automation solutions with Industrial Internet of Things (IIoT)-technologies to create new mechanisms and features that promise to unlock the full potential of improved product quality and lower operating costs.

Are you ready for the intelligent filter press? With extensive experience paired with innovation and digitalization to deliver improvements precisely where they are needed, ANDRITZ is your partner to help you reap the benefits of tomorrow's industry today.



WATCH NOW
ANDRITZ intelligent
filter press video



Get ready for the future of filtration

Several steps closer to autonomous operation

With ANDRITZ filter press technology, you are ready to reap the benefits of digitalization and IIoT – fully scaled to your needs.

A BROAD PORTFOLIO OF AUTOMATION SOLUTIONS

From smart sensors that collect all the relevant operational data of your filter press, sophisticated data analytics to turn data into meaningful information, to augmented reality that conveniently visualizes the information.

You decide how far the degree of automation of your filter press should go: From manual operation to a fully automated solution.

And that across a wide range of applications – whether it's solutions for predictive maintenance, comprehensive process monitoring and troubleshooting, or whether you want to install long-term trending for your filter press. ANDRITZ is your partner for digital solutions.

Four building blocks form the intelligent filter press

PROCESS OPTIMIZATION

Filter press operation is driven by process parameters

- Pressure
- Temperature
- pH level
- Dry substance
- Throughput

MECHANICAL INNOVATIONS

These devices support improved, smooth filter press operation

- Tilt sensors for shifting plates
- Piston stroke device
- Shaking device

INTELLIGENT FILTER PRESS

PREDICTIVE MAINTENANCE

This refers to additional sensors to support and monitor predictive maintenance

- Hydraulic oil quality
- Filtrate quality
- Hydraulic pressure
- Filter plate service life

INDUSTRIAL DIGITALIZATION

This covers systems for monitoring and automatically adjusting process performance

- Metris addIQ control system for filter presses
- Filter cloth performance and service life
- Artificial intelligence applications

GET AN OVERVIEW

ANDRITZ intelligent filter press



Benefits

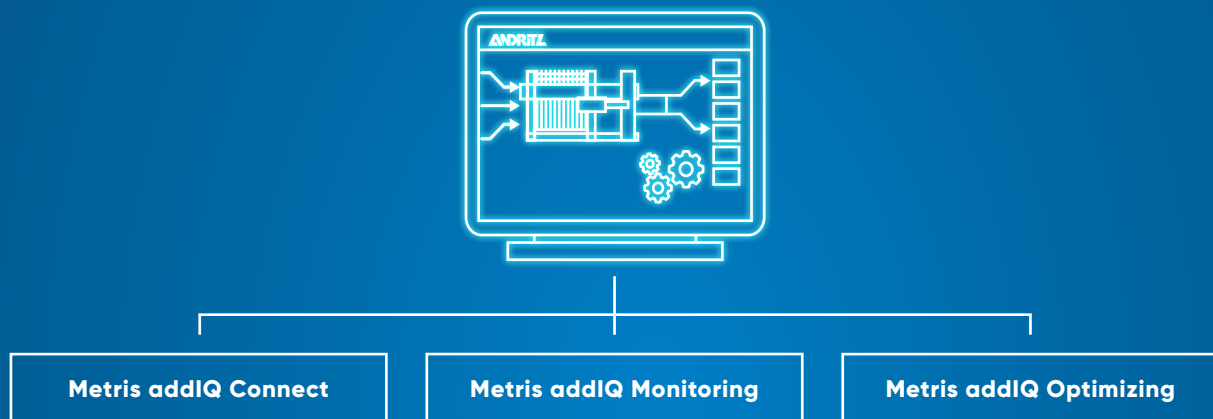
- Increased capacity by optimizing cycle time
- Optimized process parameters
- Just-in-time detection of batch faults
- Ensures ideal process conditions for downstream equipment
- Increased process reliability thanks to quality monitoring features
- Optimized productivity for filter press plants



Intelligent packages to improve your filter press and process

Metris addIQ control system for filter presses

Fully configurable according to your needs.



OPERATIONAL PERFORMANCE IMPROVEMENT



Metris addIQ filtrate quality monitoring	Metris addIQ hydraulic oil quality monitoring	Metris addIQ hydraulic closure monitoring	Metris addIQ filter cloth tracking system	Metris addIQ intelligent cloth washing	Metris addIQ membrane leakage detector
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PROCESS PERFORMANCE IMPROVEMENT



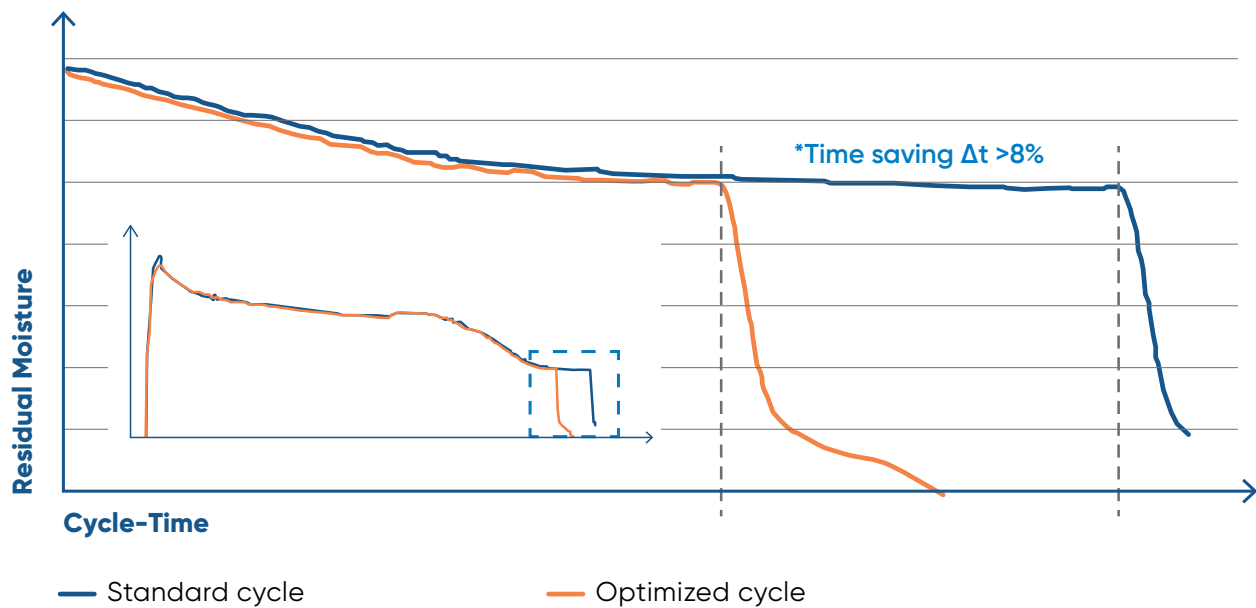
Metris addIQ piston stroke control	Metris addIQ load cells	Metris addIQ ACE for filter presses	LENSER i-Plate	Feed monitoring <i>Mandatory for process optimization</i>
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Efficient cycle time management

LENSER i-PLATE

The LENSER i-Plate offers a whole new perspective on your unique filtration process. Equipped with a built-in sensor, it monitors the entire filtration cycle

by measuring moisture, temperature, and electrical conductivity within the filter cake. By analysing these parameters, precise adjustments can be made that improve the filtration process as a whole.



Cycle time analysis and process optimization with the LENSER i-Plate based on the moisture content

*The range of the shortened cycle time depends on the respective application. In this example the result is proven in on-site tests.

Features / Technical details

- Real-time monitoring of process parameters and advice from ANDRITZ process experts
- Flexible adjustment of target values in real time
- Improved quality assurance

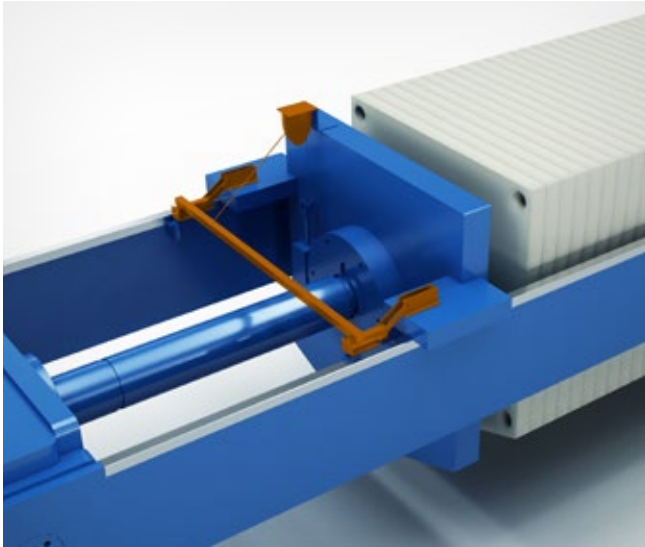
Precise and continuous real-time measurement

Benefits

- Shorter cycle times
- Higher production capacity
- Optimized operation
- Reduced energy costs and less material wear

METRIS addIQ PISTON STROKE CONTROL

Metris addIQ piston stroke control shortens the distance the cylinder and the shifting plate have to cover to open the plate pack. The system is available for sidebar and overhead filter presses.



Metris piston stroke control for sidebar filter presses

METRIS addIQ LOAD CELLS

Metris addIQ load cells measure the initial weight of the filter press and monitor it throughout the entire filtration process. This optimises the cycle times for each batch, reducing the overall cycle time to an absolute minimum.



Metris addIQ load cells

The filter press adapts easily to different products and processes

Features / Technical details

- Mechanical piston stroke device for sidebar filter presses to reduce the distance from 500 mm to 300 mm
- Electronic piston stroke device for overhead filter presses to reduce the distance from 800 mm to 550 mm
- Faster cake discharge results more cycles per day

Benefits

- Optimized cycle time
- Increased capacity
- Easy retrofitting

Benefits

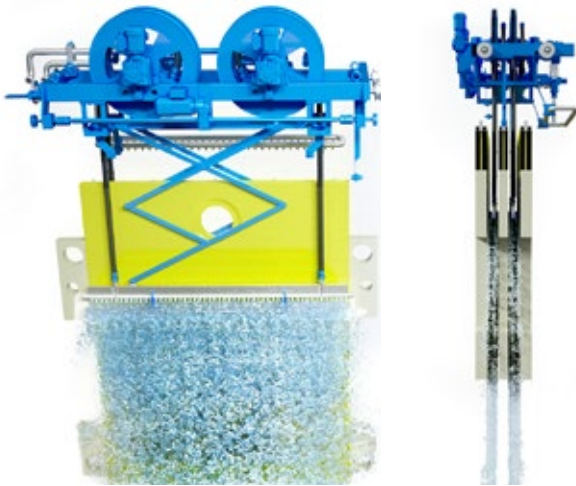
- Shorter cycle time
- Extended service life of wear parts in the feeding system
- Improved and reproducible results

Optimized cycle time for best performance

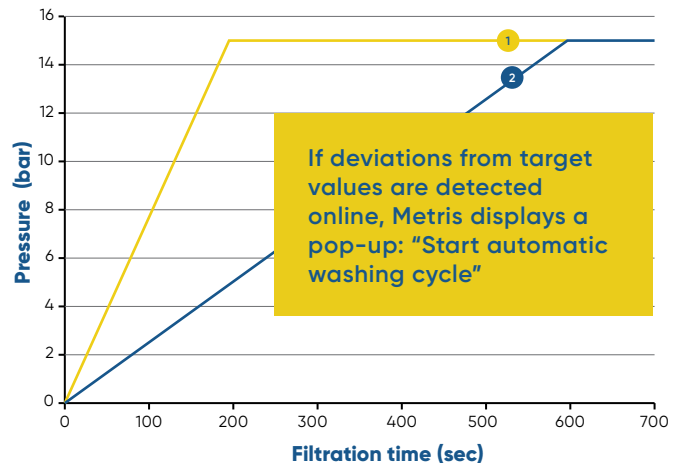
Guaranteed asset management

METRIS addIQ INTELLIGENT CLOTH WASHING

Based on sensors' measurements it is possible to determine the right moment to start the filter cloth washing. With Metris addIQ intelligent cloth washing the operator can monitor the filter cloth performance via two different tools: Process parameter online monitoring and shifting plate online monitoring.



Cloth washing device for sidebar filter presses



Online pressure monitoring

Features / Technical details

- Process parameters: By deviations from nominal values, the system prompts the operator to start an automatic washing cycle
- Shifting plate: By high deviations from nominal values, the filter press stops automatically
- Performance monitoring of filter cloths

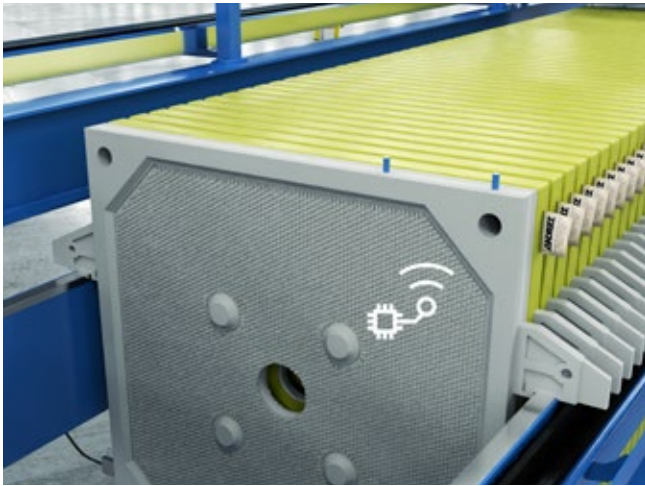
Benefits

- Extended service life of your filter cloth
- Capacity / throughput at maximum level
- Cloth washing based on actual demand
- Increased operational safety
- Less operator supervision required

Cloth washing based on actual demand

METRIS addIQ MEMBRANE LEAKAGE DETECTOR

Metris addIQ membrane leakage detector is an advanced monitoring system designed to enhance the reliability of filtration processes. Membrane filter plates may show cracks at the end of their natural service life. By utilizing state-of-the-art sensors in every plate, the detector provides real-time data and early damage detection, ensuring optimal performance.



Metris addIQ membrane leakage detector

Features / Technical details

- Targeted replacement through corresponding warning messages
- Automated monitoring without additional manual effort for the operator

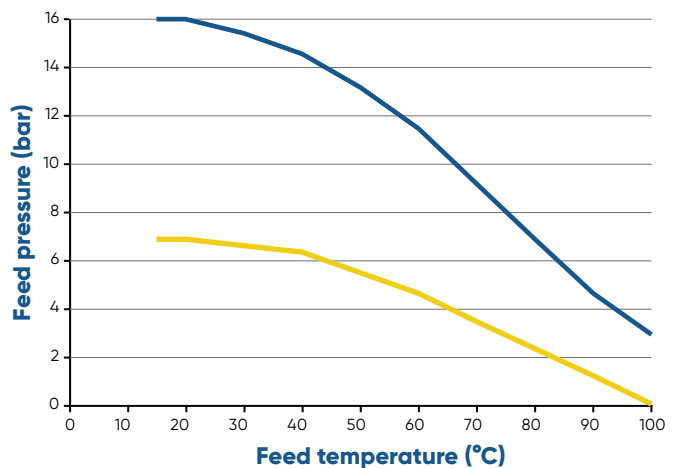
Benefits

- Increased maintenance efficiency
- Higher plant availability
- Consistent product quality

METRIS addIQ HYDRAULIC CLOSURE MONITORING

As the pressure is usually set to the highest level, the filter plates and cloths are subjected to greater mechanical stress. In addition, the hydraulic power requires more energy and is subject to greater wear. Metris addIQ hydraulic closure monitoring controls and regulates the machine's hydraulic oil pressure by optimally setting the feed temperature and feed pressure. This increases process safety and ensures optimum operating conditions.

Increase process safety and optimize your process



- 16-bar filter plates
- 8-bar filter plates

Depending on process temperature, the feed pressure is controlled by a high-fidelity control algorithm

Benefits

- Prevents incorrect operation of filter plates
- Reduced wear/ longer service life of filter plates and filter cloths
- Increased process safety



Monitor the wear of
your filter cloths for
replacements

Boost performance with filter cloth management

METRIS addiQ FILTER CLOTH TRACKING SYSTEM

The Metris addiQ filter cloth tracking system helps you to monitor the wear of your filter cloths. With this system,

your operator can carry out a planned and targeted replacement of heavily worn filter cloths to improve system availability and optimize the process.

Features / Technical details

- Based on an user-friendly software and attached RFID chip on each filter cloth
- Notice the installation date, wear of the cloths, damages etc. directly in the software
- Get recommendations to improve your machine and process performance from your ANDRITZ specialist

Benefits

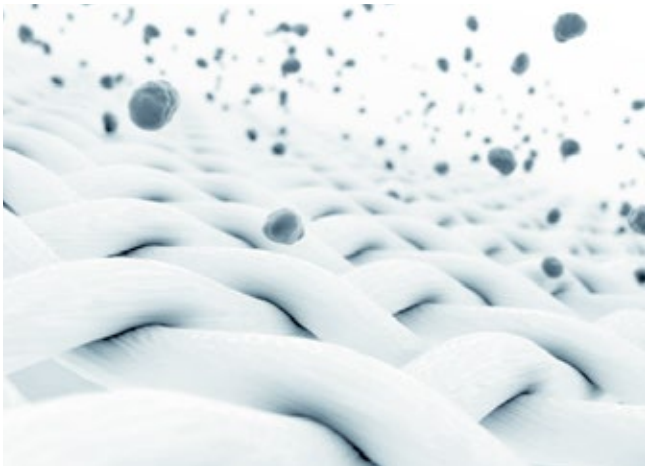
- Precise monitoring of filter cloth lifetime
- Recording of filter cloth damage for troubleshooting purposes
- Predictive maintenance for optimized planning and maximized uptime



High-level supervision with quality monitoring

METRIS addIQ FILTRATE QUALITY MONITORING

Filter cloth damage is the main cause of filtrate contamination. When filter cloths are damaged, particles may enter the filtrate. Metris addIQ filtrate quality measurement quickly recognises such damage and increases process reliability.



Real-time online monitoring of filtrate quality

METRIS addIQ HYDRAULIC OIL QUALITY MONITORING

Metris addIQ hydraulic oil quality monitoring continuously tracks the water content, particles and temperature. Consistently good oil quality prevents corrosion and damage to valves and cylinders.



Sustainable oil quality

Features / Technical details

- Identification of filter cloth damage based on detected particles in the filtrate
- Possible overfilling of chambers based on analysis of filtrate turbidity
- Filtrate quality via HMI online display

Benefits

- Avoid further damage to cloths and plates
- Longer service lifetime
- Consistent high filtrate quality
- Stable process availability by preventive maintenance

Oil changes on real demand

Benefits

- Longer service lifetime
- Predictive maintenance
- Oil changes on demand
- Corrosion protection for the oil system
- Improved operational safety

Highest performance with optimized, multiple filter press lines

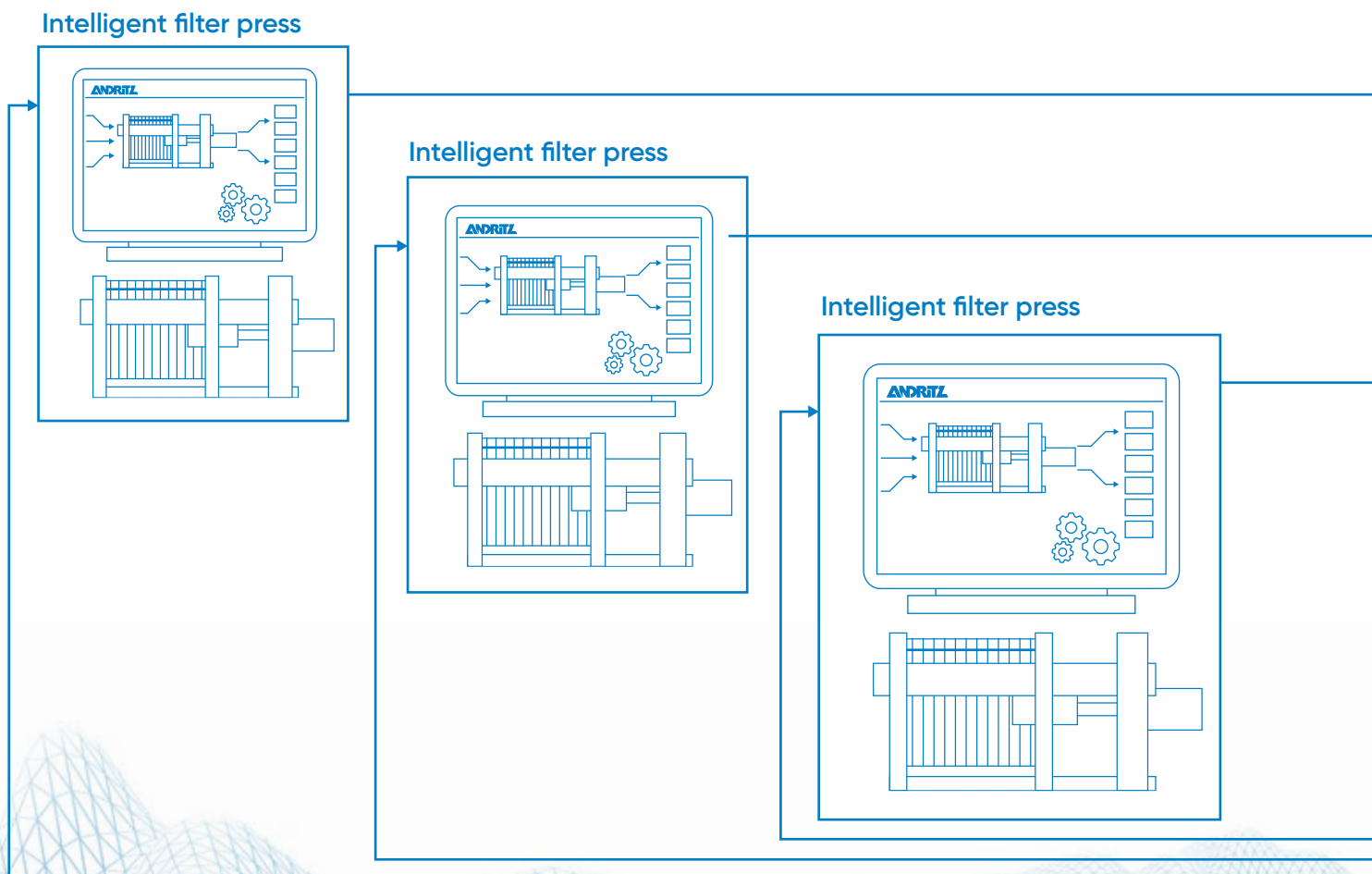
METRIS addIQ ACE FOR FILTER PRESSES

In plants with multiple filter presses, operators must decide when to take a machine out of service for maintenance tasks, such as washing or cloth changes. This decision is crucial, as it directly impacts both the plant's overall production output and water consumption. When managing more than four filter presses, maintaining a comprehensive overview of the entire filtration operation can become highly complex.

Operators must continuously monitor numerous operational factors, including throughput bottlenecks, water availability, and the operational status of upstream and downstream equipment.

To streamline this complexity, ANDRITZ has developed Metris addIQ ACE: An advanced artificial intelligence that can be integrated as an additional component in the control system Metris addIQ Optimizing.

Metris addIQ control system

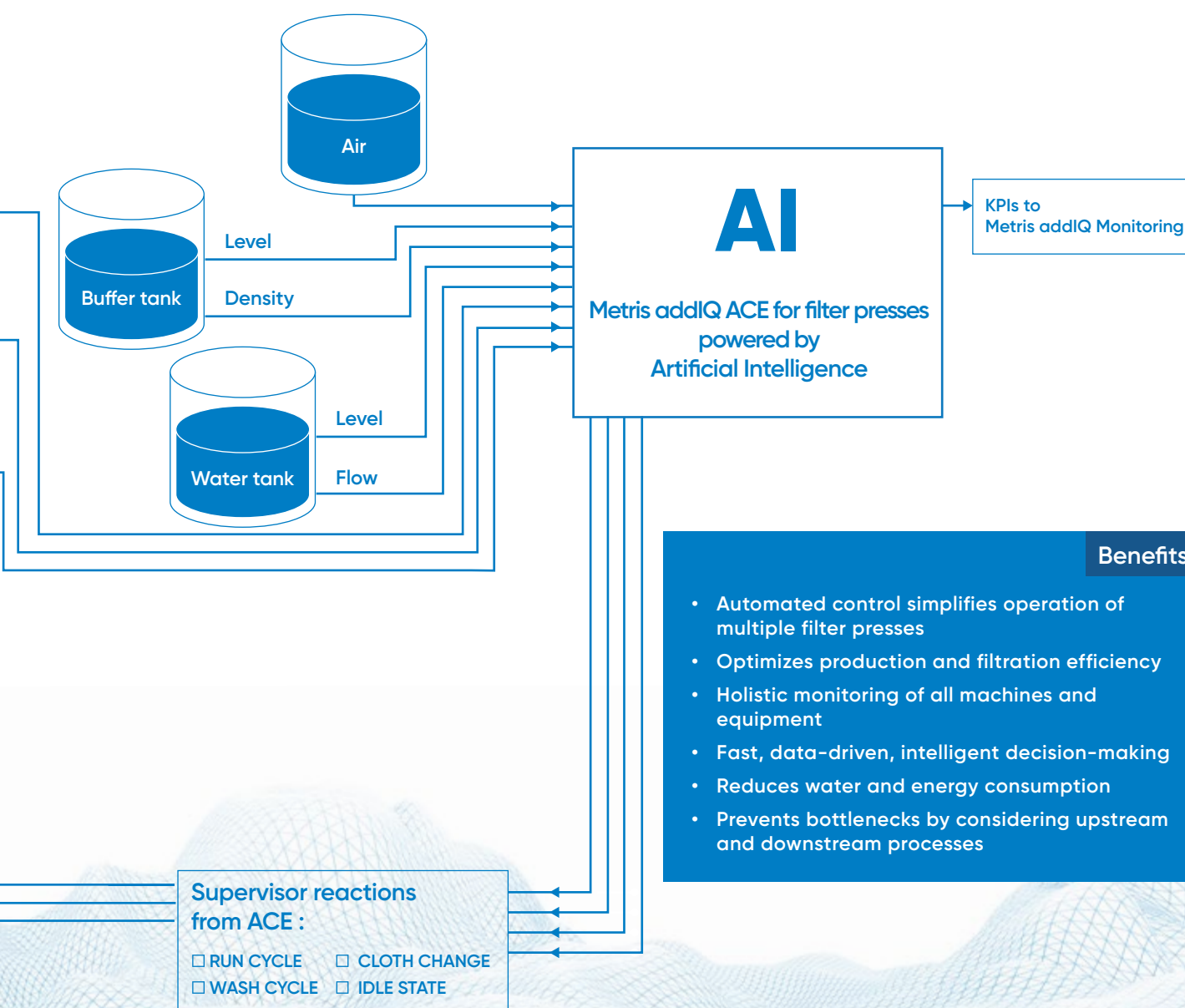


This intelligent system optimizes the filter press operation as a whole. It considers the performance of each individual filter press, while evaluating the entire plant's filtration needs, collecting real-time data from upstream and downstream operation.

Metris addIQ ACE makes intelligent, data-driven decisions that optimize production throughput, reduce water consumption, and improve overall filtration efficiency.

By treating the filter press operation as a holistic system, the solution also optimizes related equipment, such as feed pumps, helping to prevent issues like excessive power consumption.

This comprehensive approach ensures a well-coordinated, efficient, and sustainable filtration process that maximizes both operational efficiency and resource utilization.



Curious about the carbon footprint of your process?

Our experts can help pinpoint your CO₂ contributors. We then help you to reduce your carbon footprint based on process optimization (e.g. optimizing chemical usage).



Moving to a modern control system under tight time constraints



Successful process improvements with Metris addIQ control systems

Case study: Chemical plant upgrade

CHALLENGE

Customer facing the problem that no spare parts are available for his outdated control system hardware, threatening machine performance and availability.

SOLUTION

ANDRITZ supplied a new, state-of the art Metris addIQ control system which came together with Metris addIQ Connect to make remote support possible. The new control system was installed and started up very quickly, kept downtime to a minimum. During installation, all previous modifications were integrated into the new control system.

CUSTOMER BENEFITS

- Increased machine availability due to remote support capability
- Increased filter press performance and production
- Updated documentation for control cabinets (no handwritten sheets anymore)

Case study: Wastewater treatment plant upgrade

CHALLENGE

Unplanned filter press shutdowns due to outdated hardware and a lack of historical trends for analyzing machine performance.

SOLUTION

ANDRITZ provided a machine control upgrade by offering one of its Metris addIQ control systems – including the intuitive user interface that allows the customer to analyze machine performance with long-term data trending. The accessibility of more detailed data ensured sustainable machine availability of the filter press.

CUSTOMER BENEFITS

- Increased machine availability
- Production analysis and increased performance due to availability of long-term data



Put our 150 years of OEM experience to work for you

Need to optimize your process? Boost availability? Ensure non-stop productivity? By choosing ANDRITZ as your partner, you gain access to one of the world's largest OEM manufacturers for solid/liquid separation. Put our in-depth knowledge of separation equipment and processing to work for you.

VAST EXPERIENCE WITH LARGE INSTALLED BASE

With an installed global base of more than 55,000 solid/liquid separation machines and systems, you can be sure that we take service seriously. Wherever our customers are located, we work very closely with them to maximize uptime and boost efficiency.

WELL-KNOWN OEM BRANDS

Some customers know us as the people with ANDRITZ overalls. Others have come to understand that we are the OEM behind former brand names like 3Sys Technologies, Bird, Dedert, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, LENSER Filtration, Netzsch Filtration, REINEVELD centrifuges, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer and Vandenbroek – all companies that have been acquired by ANDRITZ. But, to put it simply, we are capable of servicing and supplying spare parts for nearly all brands of solid/liquid separation equipment on the market.

LOCAL SUPPORT BACKED BY GLOBAL EXPERTISE

Our service philosophy is simple: One phone call, one contact person, one dedicated team that speaks your language and knows your equipment and process. This is not an empty promise. It is backed by a network of 550 service specialists for separation equipment and systems as well as service centers all around the world.

A TRUE FULL-SERVICE PROVIDER

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ is your service specialist in all aspects of separation. From initial consulting through to service agreements, process optimization, and training programs, we are always looking for ways to minimize downtime and increase predictability in operations, while raising your overall production efficiency. In short, we've got you covered.



LOCAL SUPPORT

Responsive local service centers and field service technicians



REPAIRS & UPGRADES

Optimization of machine and process performance, repair work, retrofitting, and modernization



LAB AND ON-SITE TESTS

Lab and testing capabilities for process optimization and machine upgrades



TRAINING

Operator training and tailored seminars for operating and maintenance personnel



OEM SPARE PARTS

Filter cloths, spare and wear parts from OEMs or with OEM level quality, all readily available



SERVICE AGREEMENTS

Preventive maintenance, contracts for spare parts, maintenance, inspections, repairs, upgrades, operation, and equipment monitoring



PROCESS OPTIMIZATION

Automation tools and process expertise to boost your profit



SECOND-HAND & RENTALS

Certified second-hand and rental machines



THE METRIS COMPETENCE

ANDRITZ offers a broad and constantly growing range of innovative products and services in the industrial digitalization sector under the brand name Metris, helping customers to

- Enhance plant efficiency and profitability
- Optimize the use of resources
- Achieve constant and highest product quality
- Avoid production downtime
- Maximize user-friendliness

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