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SEPARATION

HIGH FLEXIBILITY FOR PUSHER CENTRIFUGES

PREFILTRATION TECHNOLOGY

ANDRITZ

ENGINEERED SUCCESS

ANDRITZ PreFiltration Technology – best choice for difficult operating conditions

Efficient and flexible processes provide the basis for sustainable success in global markets. The key to success is equipment that achieves maximum efficiency and stable quality while operating reliably over a wide range of process conditions. When it comes to continuous filtering centrifuges, the ANDRITZ PreFiltration Technology sets a benchmark for flexibility, delivering optimal results even under difficult process conditions.

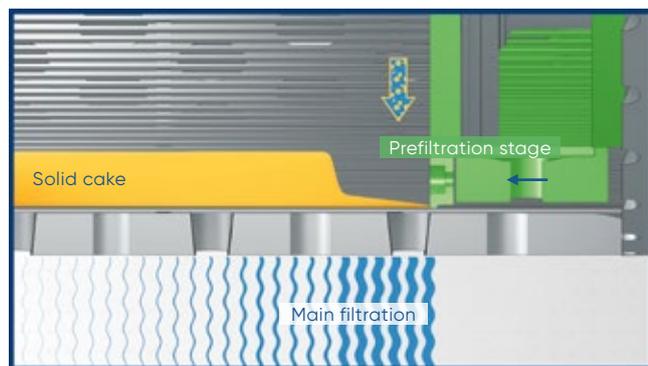
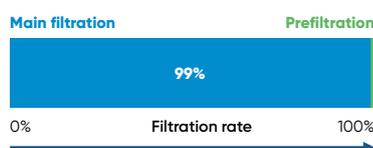
How can maximum efficiency be achieved while still maintaining a high level of flexibility that allows you to react to changes upstream such as fluctuations in flow, solids concentration, or particle size? This challenge is very often tackled by either oversizing the centrifuge or including additional upstream equipment, such as thickeners or hydro cyclones, in the process. Both approaches result in a higher capital investment as well as a larger footprint and may cause unwanted side effects.

MAKE USE OF A UNIQUE DESIGN

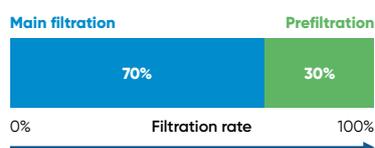
In order to solve these specific problems once and for all, the ANDRITZ Separation process specialists have developed a unique solution: the patented ANDRITZ PreFiltration Technology.

INCREASE YOUR FLEXIBILITY WITH SMART TECHNOLOGY

The PreFiltration Technology is an integrated thickening system that allows you to speed up processing of the liquid. In fact, processing in this way is twice as fast as any regular pusher centrifuge. This can help you in two different ways: On the one hand, it allows you to process twice as much liquid while keeping filtration properties and solids load constant. On the other hand, you can maintain a stable output even when filtration properties deteriorate significantly, e.g. due to a sudden decrease in particle size.



The liquid drains off completely through the main filtration zone. The prefiltration stage is not active.



The prefiltration stage compresses and moves the cake into the main filtration zone. The liquid now drains off partly through the prefiltration and partly through the main filtration zone.

COVER A WIDE RANGE OF APPLICATIONS

The PreFiltration Technology can be used in all existing fields of application for pusher centrifuges and also paves the way for new applications:

- High-viscosity mother liquor
- Improved performance with small particle sizes
- Solids with difficult dewatering properties
- Low solids concentration down to 10%

HOW IT WORKS

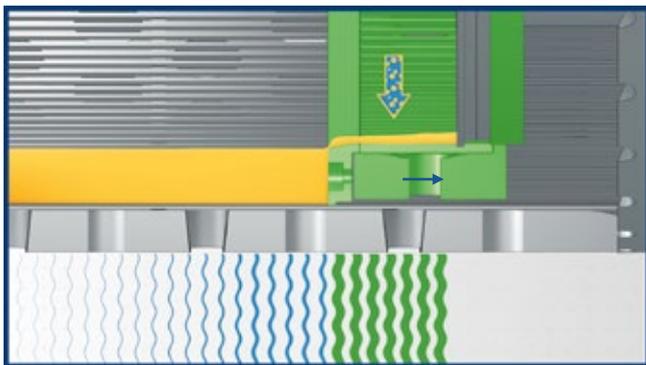
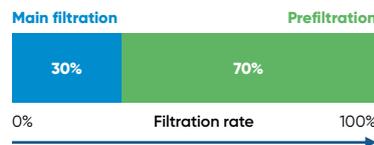
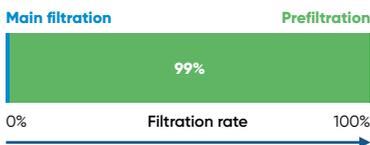
In traditional pusher centrifuges, more than 70% of the filtration takes place in the main filtration zone. If the incoming liquid cannot be removed here, the machine exceeds its liquid capacity. Due to the periodic pushing movement of the centrifuge, the main filtration zone is blocked with solid cake for about half of the time. This restricts drainage of the filtrate and thus is a limiting factor for overall performance.

The PreFiltration Technology adds an additional filtration stage to the centrifuge. This stage is free of compressed solid cake whenever the main filtration zone is blocked with compressed solid cake and vice versa. Hence, the PreFiltration Technology doubles the liquid capacity of the pusher centrifuge and thus gives you more flexibility and peace of mind during operation.

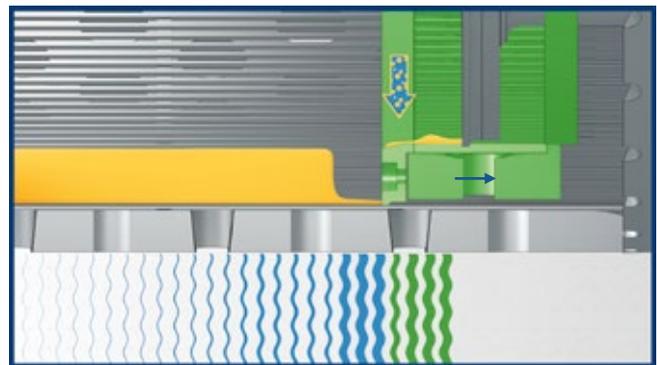
LEARN MORE

[andritz.com/
prefiltration](https://andritz.com/prefiltration)

The Krauss-Maffei pusher centrifuge with PreFiltration Technology achieves twice the filtration rate and therefore doubles the liquid capacity. This significantly increases the operating flexibility of the pusher centrifuge.



The main filtration zone is blocked with compressed cake and the liquid drains off completely through the prefiltration zone.



The prefiltration stage moves back and opens the main filtration zone. Again, the liquid drains off partly through the prefiltration and partly through the main filtration zone.





THE KRAUSS-MAFFEI PUSHER CENTRIFUGE

with ANDRITZ PreFiltration Technology

YOUR BENEFITS

- Greater flexibility to deal with fluctuating upstream conditions:
 - Due to the increased liquid capacity, it is possible to buffer changes in concentration, particle size distribution, and viscosity
- Supersedes upstream thickening equipment:
 - Due to the doubled liquid capacity, no additional upstream equipment, such as hydro cyclones and thickeners, is required, helping you to avoid high solids losses, high vibration levels, and additional maintenance effort
- Retrofittable technology

“After decades of experience with pusher centrifuges, we are quite surprised that such an innovation is still possible. The PreFiltration Technology significantly improves performance in existing applications and also opens up a wide spectrum of new applications.”

MALTE JUNKER

Product Manager for Pusher Centrifuges
ANDRITZ KMPT GmbH, Germany



Intelligence for machine and process control

Metris addIQ control systems

With Metris addIQ, you get 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.

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 covers all levels of automation, starting at basic automation (machine, process, and plant control), to upgrades, and add-ons for process optimization. Together, you get 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 addIQ control systems are part of the ANDRITZ brand for Digital IIoT (Industrial Internet of Things) Solutions.





Put our 150 years of OEM experience to work for you

Need to optimize your process? Boost availability? Ensure non-stop productivity? When you work with ANDRITZ Separation, 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 THROUGH LARGE INSTALLED BASE

With an installed global base of more than 55,000 solid/liquid separation equipment and systems, you can imagine that we take service seriously. Wherever these 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 on our overalls. Others have come to understand that we are the OEM behind former brand names like 3Sys Technologies, Bird, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Frautech, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, Lenser, Netzsch Filtration, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer, and Vandenbroek, companies who all have been acquired by ANDRITZ. But frankly, 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 Separation 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



SECOND-HAND & RENTALS

Certified second-hand and rental machines



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



LAB AND ON-SITE TESTS

Lab and testing capabilities for process optimization and machine upgrades





WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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