



SEPARATION

# EFFICIENT SEPARATION AND HYGIENIC PROCESSING IN THE DAIRY INDUSTRY

DECANTER CENTRIFUGE F

**ANDRITZ**

ENGINEERED SUCCESS

Players in the dairy industry, you are facing challenges relating to purity, hygiene, energy savings, and process optimization every day. There is one solution that can help you to solve these issues: the ANDRITZ decanter centrifuge F! With more than 15,000 decanter centrifuges installed around the world, the decanter centrifuge F specially designed for the food industry meets the most demanding requirements of dairy experts.



## RELIABLE TECHNOLOGY BASED ON DETAILED KNOWLEDGE OF THE PROCESS

At ANDRITZ Separation, we know every process in the dairy industry, and we pay attention to your every need: each dairy application has its own specially designed decanter with specific features to achieve the best performance and meet all of your requirements.

## HYGIENIC PROCESSING

The general machine design has been modified to fulfill the stringent demands of the dairy industry in terms of hygienic design and concept. Surfaces, seals, and angles are designed in accordance with the latest food guidelines, such as 3A or EHEDG. Depending on the specific application, the ANDRITZ decanter centrifuge F comes equipped with various cleaning phases in the cleaning-in-place (CIP) system.

By using our Metris addIQ control system, up to ten CIP phases can be planned. The integrated CIP nozzles ensure optimum cleaning efficiency for all related parts, such as solids and liquid casing, feed pipe, or outer bowl parts, thus preventing any impurities or contamination in the next production run. The machine is manufactured in SANITARY design as standard (fully stainless steel frame and final polishing of <math><0.8\text{ RA}</math> in all areas in contact with the product), but can also be quoted with the PERFORMANCE finish (plain steel frame with stainless steel parts integrated or with a separate housing made entirely of stainless steel).

## YOUR BENEFITS

- Excellent performance and clarification due to optimized scroll design
- Maximum availability as a result of excellent cleaning properties and fully automated CIP
- Optimum product quality thanks to integrated washing device and special feed chamber, ensuring gentle treatment
- No need for defoamer as a result of a special pressure discharge system at the liquid end
- Able to accommodate customer needs and provide best performance thanks to modular design
- Robust design and high-grade materials for long service life
- Low maintenance cost and easy dismantling with unique inline design



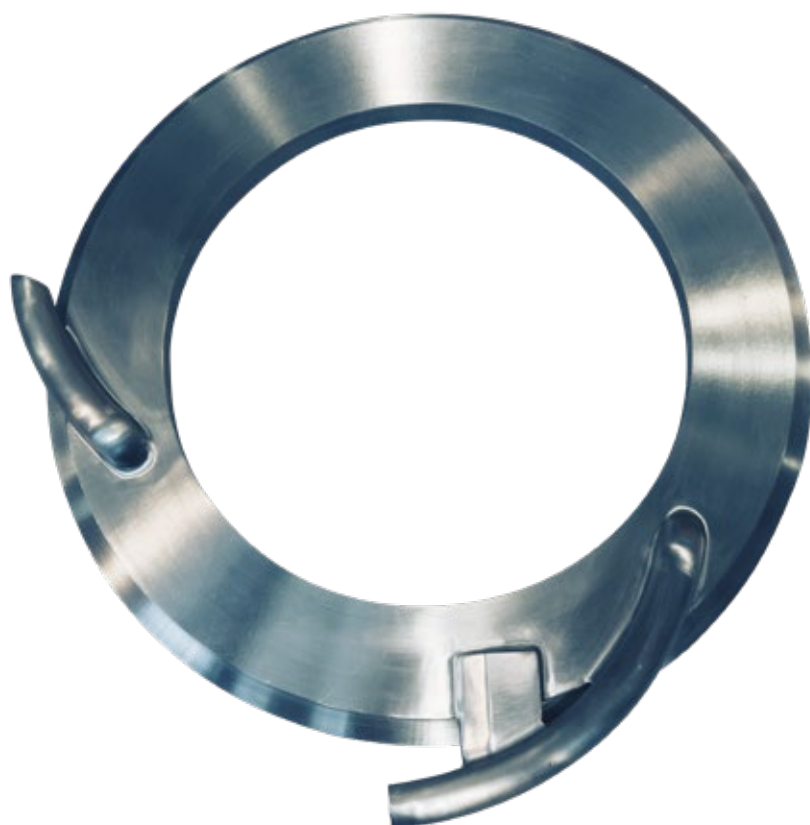
Application-driven scroll design

# Application-driven design to offer you specific benefits

Washing ramp of CIP system

Coming in sanitary design and with fully integrated CIP for all dairy applications, our decanter centrifuge F also satisfies the specific product-related demands with other particular features:

- **Casein and milk protein:** low-foam centripetal pump design so that there are no limitations at the whey end, and best whey clarification due to our open flight concept.
- **Lactose:** Short bowl combined with the gentle feed device for lowest possible crystal shearing effects, internal washing for higher lactose purity, and duplex MOC for abrasion resistance. This decanter has been designed to handle high solids loads.
- **Cheese fines:** Pipette device to adjust the pond level during operation in order to optimize clarification and obtain a higher yield. Variable differential speed ensures a constant solids concentration, even under variable feed conditions.
- **Milk minerals – calcium phosphate:** Handling of thixotropic calcium phosphate slurry and high capture rates due to special scroll design and pipette device (designed to enable precise adjustments).



Centripetal pump

# Our range for your efficient separation and hygienic process

Our large range of decanters helps us to provide you with a solution to meet your specific demands in the dairy industry. The application-driven design, combined with the features in our full range of machines, can handle the capacities you need. From low end flows with low solids contents up to high flow rates with high solid contents, we can assist you in all your separation challenges.

## TWO LEVELS OF FINISH

Depending on your requirements and the final use of the product, ANDRITZ Separation experts can recommend different levels of finish:

- **Performance**, plain carbon steel frame with separate housing and cover made of stainless steel and bowl parts polished to the needs of the application
- **Sanitary**, our standard for dairy applications, fully stainless steel frame and polishing of areas in contact with the product to <0.8 RA

Whatever the level of finish, you can benefit from the following standard scope of supply:

- G-force up to 3,500 g
- Three types of drive, depending on your application (single motor, back drive, and regenerative drive)
- Low energy consumption features
- High resistance to abrasion (special material on scroll flight) with all wetted parts in stainless steel or duplex
- Washing points (bowl, solid and liquid casing, feed tube double skin)
- Metris addIQ control system for decanter centrifuges is linked to your SCADA system – decades of experience in automation for ease of operation and production optimization



Model	F2000	F3000	F4000	F5000	F6000	F7300
G-force (g)*	Up to 3,500	Up to 3,500	Up to 3,500	Up to 3,500	Up to 3,500	Up to 3,500
Main motor (kW)*	7.5-15	11-37	22-45	37-55	75-132	90-200
Secondary motor (kW)*	5.5-7.5	5.5-11	5.5-15	11-22	15-37	37-90

\* Depending on your specific application



# 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.



# Your full-service provider

With ANDRITZ Separation, you gain access to one of the world's largest OEM manufacturers for solid/liquid separation systems, including such well-known brands as 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.

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ Separation is your true full-service provider. 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. Wherever you operate, our network of 550 service specialists and global service centers ensures we'll always be there to support you for many life cycles to come. Let's sit down and see how we could take your operations to the next level.



#### 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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