



What's next for your business?

What new products are in your pipeline? How will you stay efficient enough to fend off growing competition? What will be the future trends in tastes and textures? And how will you capitalize on these fast-changing market demands?

YOUR GOALS COME FIRST

Having served the food industry for 100 years, such challenges are not uncommon to us. In fact, we're working to respond to them every day for customers ranging from niche local producers to vast multinational operations. Take baby food, for example, where we partner with most of the major global players to realize product innovations, optimize products in our test labs, or develop new recipes that meet the evolving tastes and preferences of consumers across the globe.

PRODUCTS KNOWLEDGE SOLUTIONS

OPTIMIZING THE PROCESS

Naturally, not everyone has the global muscle of a Cadbury, Danone, or Cargill, to name but a few of our clients. Many are small or midsized dairies, vegetable oil, palm oil or juice producers, breweries, or wine manufacturers. And all of them want to improve product quality, boost efficiency – or ideally, to achieve both at the same time. In one instance, we worked with local casein producers to develop a low-foam decanter feature capable of saving producers up to 25,000 euros a year. The result? A purer, more profitable product, and a more efficient use of resources.

A PROMISE BACKED BY RESOURCES

As a global organization with 25,000 employees in 40 countries, the ANDRITZ GROUP not only welcomes such solid/liquid separation challenges – we have the experience and resources to tackle them. So what's next for your operation?

The knowledge to support your needs – the right solution for any challenge

Nowadays, the demand for new taste sensations and food products is limitless. As meeting these demands in the global market becomes more complex, we believe it's time for a simpler, more comprehensive approach. One that places your needs at the center of everything.

As the world's leading separation specialist, we can provide our customers with a comprehensive range of customized services and solutions for any solid/liquid separation challenge. It's an approach that starts not with a particular separator, decanter, or filter press, but rather a careful evaluation of their objectives. And it all starts with a frank discussion about end product quality, efficiency, capacity, processes, and local support.

COMPLETE RANGE OF SOLUTIONS

With ANDRITZ Separation, you gain access to one of the world's most complete portfolios within mechanical and thermal solid/liquid separation. Whether you are looking for a particular separator, clarifier, decanter, filter press, or dryer, we offer a range of solutions. As a result, we can serve as a neutral advisor in selecting the technology best suited to your process. It's a consultative approach that gives you all the right ingredients for your success in the food industry.

WE'VE GOT YOU COVERED

Our ambition is to give you full access to the world's leading specialists, services, and solutions in all types of separation processes – from drying and cooling to filters, presses, and gravity systems. Backed by the strength of a global R&D and automation backbone, the ANDRITZ GROUP has 250 production and service sites, together with 25,000 employees in 40 countries. With the power of our parent company behind us, we are continuing to innovate to help you keep a step ahead – wherever you and your customers happen to be.



As the world's leading separation specialist, we are committed to delivering the right knowledge, services, and solutions for any separation challenge.

SUSTAINABILITY

We know how to utilize resources to create value from side streams.

COMPONENTS & PARTS

24/7 service through local inventory and nearby service centers.

MAINTENANCE & TECHNICAL SUPPORT

Specialists who can maintain,diagnose, and resolve problems, including remote diagnostic tools.

OPERATIONS

Covered by different service packages.

OPERATIONAL SAFETY EXPERTISE

Safe plant design through deep knowledge of local requirements and safety regulations.

ON SITE

Process and equipment optimization or tests with alternative solutions based on OEM know-how.

PROCESS CENTER

R&D and test labs for analysis, process development, and scale-up.

FULL EQUIPMENT RANGE

Flexible, product-neutral selection of equipment (decanters, separators, basket centrifuges, filters, dryers, etc.).

NEEDS ASSESSMENT

Consulting session to describe and define goals and objectives.



A partner with deeper expertise – innovations that stand the test of time

With more than 100 years' experience in the food industry, ANDRITZ Separation is one of the world's largest suppliers of mechanical and thermal solid/liquid separation and automation. Whether you're an international group or a family company, our mission is the same: to provide reliable, hygienic, and efficient solutions that improve the quality of your end products.

Our new customers are sometimes surprised to hear about the sheer depth of our experience in separation technology. Or that we've actually delivered more than 2,000 separators and 1,000 filter presses, not to mention more than 500 units for baby food alone. Or that we're adding hundreds of new references every year.

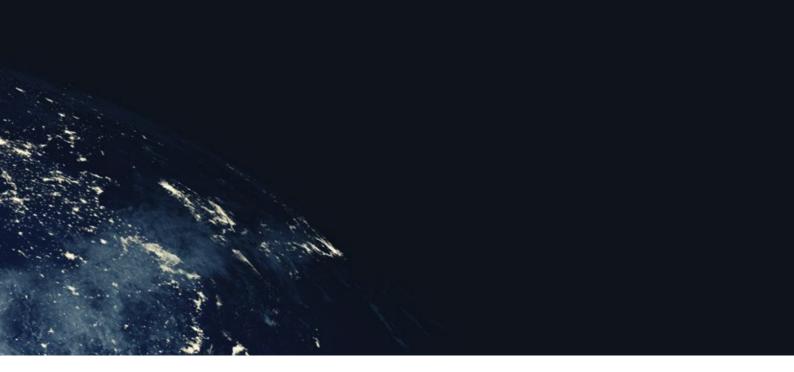
WELL-RESPECTED, QUALITY NAMES

This is not so surprising since the ANDRITZ GROUP has grown substantially through acquisitions. As part of this growth, we've acquired some of the best brands in the business (see above).

2,000 machines sold every year by ANDRITZ Separation

25,800 employees in 40 countries in ANDRITZ GROUP

years of experience in the separation business



YOUR PARTNER IN INNOVATION

When it comes to solid/liquid separation, you can rest assured of getting the optimal choice for your needs – whether it's presses, centrifuges (e.g. filtering centrifuges, separator, or decanters), filters, screens, or drying/cooling systems. We also have the ability to develop and tailor the right solution with you using our lab and test capabilities located throughout the world. Once installed, ANDRITZ Separation equipment comes with the support of a strong global service network for the food industry and all its applications.

STRONG BRANDS:

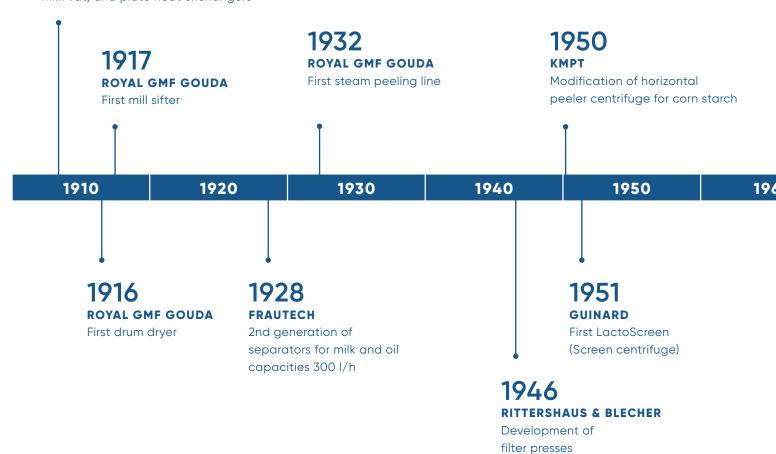
- 3Sys Technologies
- Bird
- Delkor Capital Equipment (Pty) Ltd.
- Escher Wyss dryers
- Frautech
- Guinard Centrifugation
- KHD Humboldt Wedag
- Krauss-Maffei centrifuges dryers, and filters
- Lenser
- Netzsch Filtration
- Rittershaus & Blecher
- · Royal GMF Gouda
- Sprout Bauer
- Vandenbroek

We have a long history of separation in the food industry

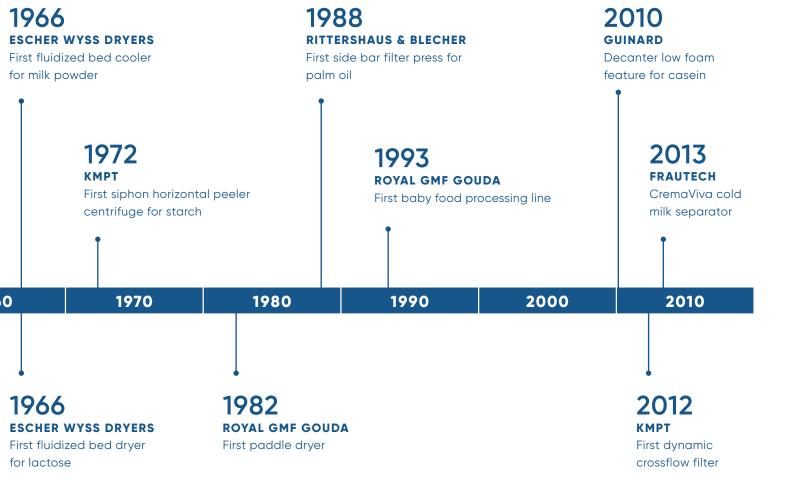
1913

FRAUTECH

First solid bowl separator for milk capacities 20–100 I/h as well as small milk reception unit, small and basic milk vat, and plate heat exchangers







The right ingredients for your success

Need to maximize yield from your raw materials? Improve the purity of your product? Whatever your specific need, our aim is to put all the right solutions at your fingertips to ensure success. With one of the broadest ranges of experience in the global food industry, we have a full array of tools for optimizing both performance and quality. How can we help you?



DAIRY

Quark, cheese, milk, cream, whey, WPC/WPI, lactose, casein, milk powder for chocolate, hydrolyzed whey proteins, and specialty products like lactoferrin



BABY FOOD

Dried infant food, dried baby food, and breakfast cereals



BEVERAGE

Beer, wine, juice, spirits, prosecco, champagne, cider, smoothies, ketchup, soy milk, coconut water, coconut milk, mango pulp, instant and RTD coffee and tea, and essential oils



VEGETABLE OILS

Olive oil, palm oil, sunflower oil, soy oil, canola oil, coconut oil, cotton oil, biodiesel, and byproducts such as glycerin, soap, fatty acids, stearin, olein, surfactants, and other oleochemicals

Expertise that comes full circle.

Whatever your food production needs, we most likely have both the technology and process knowledge to help you create it. Whether it's baby food or instant coffee, daily items like juice and olive oil, or even fine cheeses and champagne. It might be a white-label product that hits the right price point with the highest margin, or an enriched sterile by product. Or maybe you want to create a niche product with uncompromising purity and an unforgettable taste. From the supermarket shelf to the local delicatessen, our expertise is always close at hand, and easy to access and maintain.



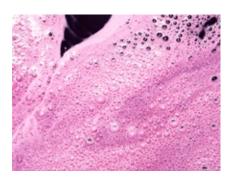
NUTRACEUTICALS & FUNCTIONAL INGREDIENTS

 Ω -3, tocopherol, polyphenol, pectin, xanthan, sugar substitutes (stevia), antioxidants, vitamins, and glutamate



SUGAR

Cane sugar, molasses, beet sugar, and sugar couleur



INDUSTRIAL FERMENTATION

Amino acid, citric acids, succinic acid, bakers' yeast, and green and white biotech



ANIMAL PROCESSING

Animal fat and oil, biodiesel, fish oil, protein and hydrolysate, and gelatin



BIOALCOHOL

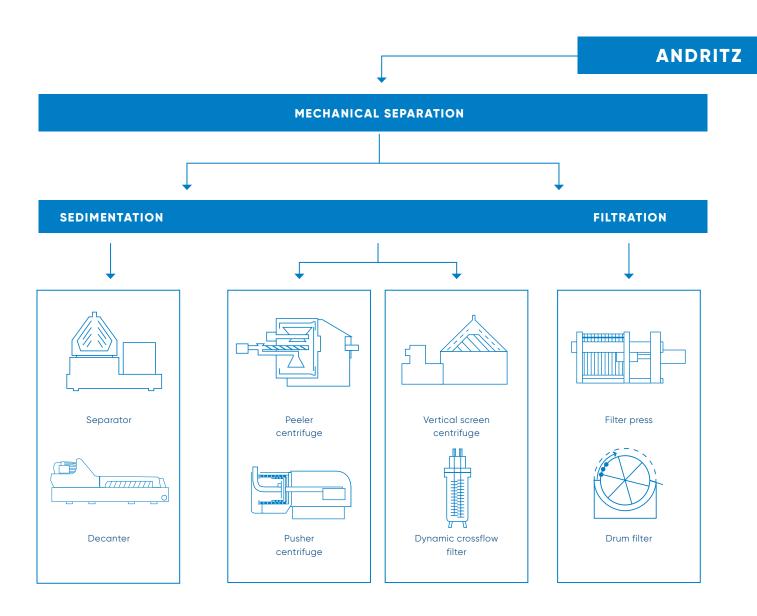
Stillage, corn oil, and distillers' dried grains with solubles (DDGS)



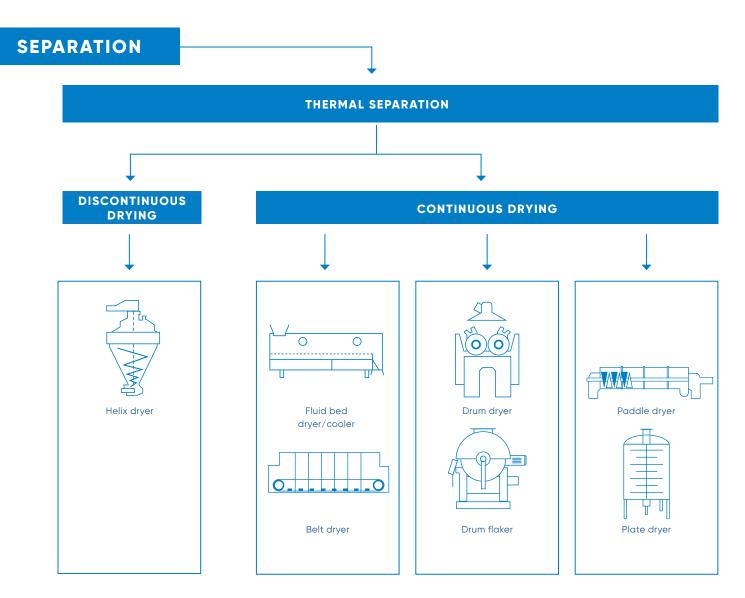
STARCH & PROTEINS

Native and modified starch from corn, wheat, potatoes, tapioca, cold-soluble starch, HFCS, glucose syrup, dextroins, polyols (sorbitol, mannitol), gluten, and other proteins from starch sources and soy

A complete range for all your food separation needs







A broader approach to tackling tomorrow's dairy challenges

What's the next big opportunity for your business? Despite having worked with thousands of dairy customers over the years, the answer to this question is never quite the same. Whether it's boosting your margin on white-label products or ensuring the superior quality of a branded product, it all comes down to your ability to choose from one of the industry's broadest ranges of separation solutions. Solutions that meet the fast-changing needs of today, and for years to come.

A CENTURY'S WORTH OF INSIGHTS

Under Frautech, Gouda, and other brand names, we've applied our global resources to serving dairy producers of all sizes and applications throughout the world. This includes upgrades, process optimization, mechanical audits, and more. It's this knowhow that we apply to approximately 150 dairy installations every year for customers like Nestlé, Arla, Fonterra, and other more local producers. Whether it's gentler treatment that preserves the quality of ingredients or a higher output with lower operating costs, it's all about providing the expertise you need to create pure, natural products that give you an edge on the supermarket shelf.

COMPREHENSIVE RANGE OF SOLUTIONS

You might be producing casein, lactose, or whey proteins. Or maybe it's cream, cheese, or probiotic yogurt. Whatever your business, you need reliable solutions that produce optimal taste and texture – together with a local partner who knows your production unit, the ideal machine for the job, and how to service it. Our solutions cover everything from clarifiers, bacteria removing separators, and skimmers to decanters, membrane filters, and dryers, among many others. With deep knowledge of the full range of dairy production processes, we provide some of the market's most efficient and reliable equipment for virtually any application.

EXAMPLES OF DAIRY CUSTOMERS

Nestlé, Arla, General Mills.

KEY PROCESS STEPS

- Clarification of milk and whey
- Bacteria removal
- Skimming of milk and whey
- Cream concentration
- Membrane filtration
- Drying processes

END PRODUCTS

- Milk
- Cream
- · Cheese
- Quark
- · Soft cheese
- Butter
- Butter oil
- Baby food
- Whey protein
- Lactose
- Casein



ANDRITZ separator

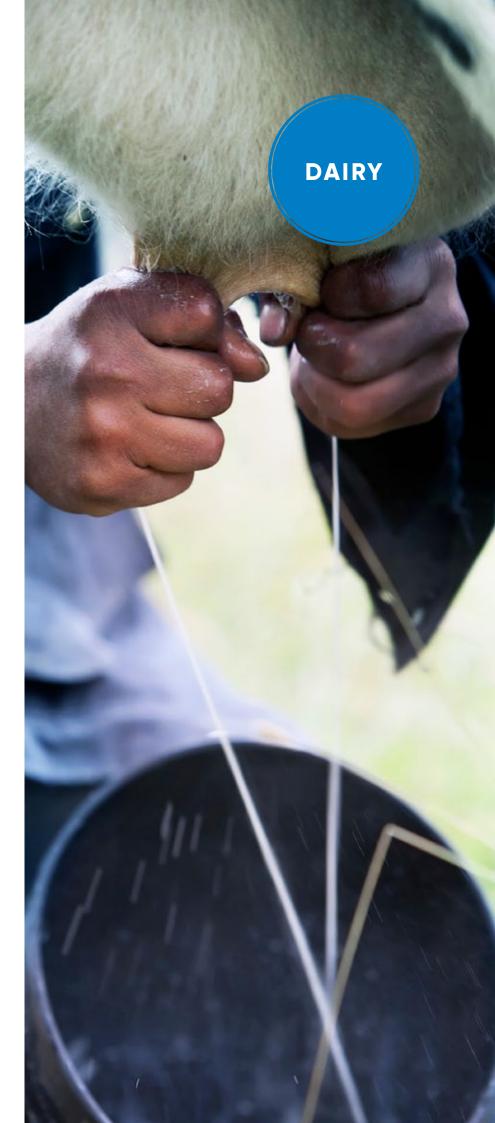
new installations a year

100 / years of separator technology

3,000 / separators installed worldwide

"The new lowfoam decanter
saves us
25,000 euros
a year in
defoaming
agents alone."

CASEIN PRODUCER, FRANCE







It's no secret that our supermarkets are overflowing with choices. Less well-known is the fact that, of all new food product innovations, just one in twenty will survive their first year on the shelf.

For producers of branded dairy products, it's a story of intense competition to create higher quality tastes and textures that appeal to today's overcrowded consumer market. The path to success is a risky one, demanding innovative production solutions that ensure the precise qualities that customers demand.

Our wide range of separation solutions can help to improve quality or reduce costs.

Take our CremaViva cold milk separator, for instance, which preserves more milk fat globules through its gentle milk treatment technology.

The result? A better cream, a better end product, and a better chance for a breakthrough.

Gentle treatment, flawless hygiene superior taste

It goes without saying that the manufacture of food for babies and infants needs to be of the highest quality, with absolutely no risk of contamination. At the same time, the process has to be highly efficient while producing that distinct, memorable taste. These are just a few of the reasons more producers around the world choose to partner with us.

Through our acquisition of Royal GMF Gouda of the Netherlands, we gained a market-leading storehouse of knowledge in all aspects of dried baby food manufacturing. This includes technologies covering the complete process line for drying, milling, mixing, and more – many setting new industry standards in hygiene and efficiency.

UNMATCHED EXPERTISE

Under the name ANDRITZ Gouda, we continue to bring reliable and efficient solutions to leading baby food producers throughout the world. To date, we've installed more than 500 drum dryers and dozens of turnkey lines for baby food production. Capabilities range from design, engineering, and pilot plant testing to installation, commissioning assistance, and after sales service for single process steps on up to complete process lines.

SETTING THE GLOBAL STANDARD

In the food industry, we are well known for our proprietary drum drying technology for dried baby food. It's a technology known for the unique taste, full gelatinization, and consistent quality of its end products. Over the years we've raised the benchmark even further, continuously optimizing our machines to set new hygiene standards and developing new process solutions to meet specific customer challenges. From our "kitchen" in Waddinxveen in the Netherlands, we can test baby food and cereal applications or even optimize your recipes to produce the roasting effect, bulk density, or film thickness your products demand.

KEY PROCESS STEPS

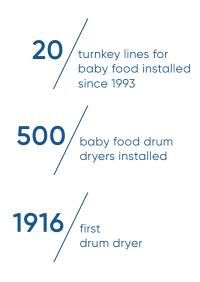
- Reception and raw ingredient preparation
- · Recipe mixing
- Holding/buffer tanks
- · Slurry pre-cooking
- · Drum drying
- Milling
- Storage
- Weighing
- Packaging

END PRODUCTS

- Dried infant food
- Dried baby food
- Breakfast cereals



Drum dryer



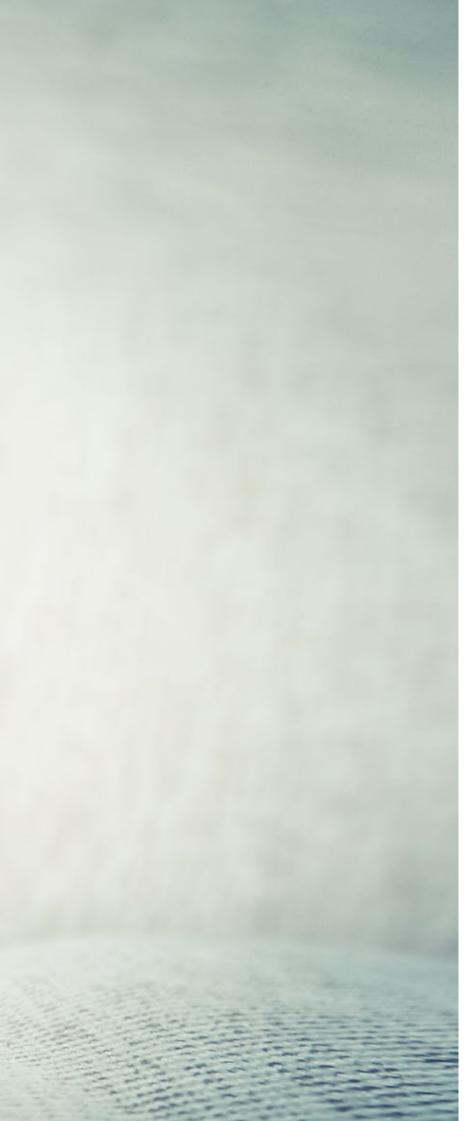
"Most multinational baby food producers today are using our equipment. The level of quality is something their customers simply expect."

ANDRITZ SEPARATION









Their tastes might not yet be sophisticated. But they're the most sensitive customers you'll ever meet.

Enthusiasts for particular flavors, they also need their food to be the right consistency, easy to digest, and absolutely 100% pure. It's a unique mix of properties that only drum drying can produce.

Having served the dried baby food industry since 1916, we know how demanding your smallest customers can be. And they're counting on your equipment to meet the uncompromising standards they deserve.

Driven by innovation

Seasonal microbrew? Soy milk? Or coconut water? The world of beverages is a crowded one to say the least. Whether you're producing beer, wine, juices, coffee, tea, or soy drinks, the pressure is on to create new, exciting sensations – and to keep them coming faster than ever before.

For customers like AB InBev and Eckes, quality and innovation go hand-in-hand. Backed by the most reliable equipment – which ensures optimal flavor, extraction, recovery, and uptime – they have the freedom to continuously innovate new product lines. This is where our 150 years of expertise in solid/liquid separation comes in.

WINE

Within wine production, we have numerous installations and several test labs across the globe. This amounts to a full range of innovative solutions, including our Dynamic Crossflow Filter (DCF) system. Flexible enough for red, white, or sparkling wine, the DCF makes it possible to achieve twice the throughput of comparable systems, with an unsurpassed 95% recovery rate.

BEER

Thanks to a partnership with renowned German brewery supplier Ziemann, you can engage the biggest and most efficient mash filter press for the brewing industry. Our high-speed clarifier provides maximum separation efficiency at low operating costs in applications ranging from hot wort separation to final clarification before filtration. In addition, our beverage center in Vierkirchen, Germany, is equipped with the latest test devices, pilot machinery, and industrial-scale units to help you develop new processes – or upgrade age-old traditions.

FRUIT JUICE

From international groups to family companies, the challenge is essentially the same: to boost yield and extract the best characteristics from fruits and byproducts. With pilot plants, service staff, and engineers near you, we're always nearby with industryleading solutions and process developers to support you.

KEY PROCESS STEPS

- Extraction
- Clarification
- Filtration
- Stabilization
- Recovery
- Dewatering

END PRODUCTS

- Beer
- Wine
- Fruit juice
- Champagne
- Cider
- Smoothies
- · Soy milk
- · Coconut water and milk
- · Mango pulp
- Coffee
- Tea
- · Essential oils



Decanter pipette



Dynamic crossflow filter

years of decanter technology

>3,000 separators sold

"With its better clarification, simpler control interface, and smaller footprint, our ANDRITZ clarifier was a natural choice."

JORGE FUENZALIDA

Winemaker, Curicó Cellar





As a beverage manufacturer, you might get just one chance to make a lasting impact. One day it's an experimental local drink. The next day, a global phenomenon.

In today's fast-moving marketplace, timing – next to taste – is everything. Which is why it's essential to have a production line reliable and versatile enough to meet market demands. One that's more responsive, scalable, and efficient for consistently high-quality production.

Vegetable oil - Higher margins, lower costs

Whether you are producing palm oil, rapeseed oil, olive oil, or other edible oils, you want to be more competitive. Margins are tight. Taste is key. Sustainability is important. The challenges are as diverse as the industry itself. Which is why you need a separation partner that understands your process and can offer a wide range of solutions.

EXTENDING A LIFETIME BY 30%

Innovative thinking is essential to meeting the future demands of vegetable oil producers. Take palm oil, for example, the world's most widely used vegetable oil and a business with razor-thin margins. Here, the challenge is to ensure 24/7 production, extracting as much from the palm fruit as possible. To support palm producers, we offer an innovative filter press plate design that avoids membrane breakages and extends membrane lifetime by up to 30% compared to conventional center-feed designs.

SUSTAINABLE PRODUCTION

We are the only company in the world that can offer decanters, separators, filter presses, and a way to save 80% on hydraulic oil expenditures, thanks to our innovative Palm Olein Power Pack.

GLOBAL TRACK RECORD

Whether you are an olive oil producer looking for a specific type of decanter, a seed oil producer in search of an efficient separator, or a palm oil producer looking for a filter press, we have a diverse range of solutions. For more than 70 years, we've been supplying names like Cargill, Wilmar, Sime Darby, and Golden Agri. Our experience has not only made us wiser – it means we can act quickly.

KEY PROCESS STEPS

- Pressing
- Extraction
- Clarification
- Purification
- Degumming
- Neutralization
- FractionationWinterization
- Dewaxing
- Recovery

END PRODUCTS

- · Crude palm oil
- Palm olein
- Palm stearin
- Super olein
- Hard stearin
- · CBE
- · CBS
- Oleochemical
- Hydrogenated oils/ fatty acids
- · Soybean oil
- · Rapeseed oil
- Sunflower oil
- Olive oil
- Mango pulp
- Coffee
- Tea
- · Essential oils



High-capacity palm oil filter press

food filter presses supplied

savings on expenditures for hydraulic oil due to Palm Olein Power Pack

days from start to end of commissioning of our palm oil filter presses

"During the past
45 years, we've
provided more
than 500 filter
presses and other
types of separation
solutions to names
like Cargill, IOI
Loders Croklaan,
Sime Darby, and
more."

ANDRITZ SEPARATION







Place a drop of olive oil on your tongue. Roll it around and let the taste, texture, and aroma take over your senses. As experts will affirm, that single moment reveals a thousand tales about the quality of the olives, the pressing, processing, and more. There was a time when countries like Spain, Italy, Greece, Portugal, and Morocco all had tens of thousands of local family olive oil operations. Many still exist but there is a widening gap between small and medium-sized enterprises and international conglomerates.

Olive oil may be a delicate product, but many of the production challenges are not unlike those of other edible oils. To be successful, you need to find a balance between time-honored traditions, building a strong brand, and delivering consistent quality at an attractive price. The battles are being played out on supermarket shelves around the world.

Our decanters – which are efficiently designed to minimize both oil loss and wastewater – can significantly reduce your total cost of ownership. Best of all, they have little to no effect on the natural taste of your oil, allowing you to deliver a high-quality product that can win over the hearts of consumers.

Let's be brilliant - together

Ever since our first research and development test in 1913, we've been partnering with customers in the food industry to improve their success. Today, we offer a wide range of global, regional, and mobile R&D test capabilities to support dairy, vegetable oil, beverage, baby food, and other types of customers. In total, our 40 different lab-scale machines are performing dozens of tests for new applications – 365 days a year.

BETTER BEFORE CHEAPER

We believe that investing in R&D in solid/liquid separation is critical to meeting the demands of tomorrow's food industry. We are not alone. According to a study of 25,453 global businesses published in the Harvard Business Review, the most successful companies are those who are innovating to make things "better before cheaper".

Whether you are producing yogurt, vegetable oil, or a new type of beer or baby food, you can find ways to do it better. How do we know? Because we do this every day for our customers, many of whom are discovering ways to improve the purity, texture, and taste of their products. Others are more focused on finding ways to optimize their processes. The secret to success is often based on trust, creative collaboration, and goal-oriented thinking – together with the world's leading separation specialists.

R&D CLOSE TO YOU

Because many of our customers work in perishable food industries, we understand that shipping of samples to our labs is not always possible. That is why we provide mobile test equipment close to you. It means you can test your end product on site – and be assured of scaling up easily to industrial scale.

Our brain power is your strength

GLOBAL R&D FOOD PROCESSING CENTER

REGIONAL FOOD LABORATORIES

- North America
- · South America
- China
- · Southeast Asia
- Europe

MOBILE TEST UNIT HUBS

- Europe
- Russia
- North America
- South America
- China
- Southeast Asia
- · Africa (sub-Sahara)

of our sales are reinvested in R&D

5 continents with local R&D support

>100 tests per year for new food applications





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, 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 machines 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 – all companies that 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 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



TDAINING

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





Ask your Separation Specialist.

Now you've seen how ANDRITZ Separation is striving to bring you the right ingredients for success: Strong local service; R&D close to you; reliable and efficient solutions; all backed by a 150-year track record.

Let's sit down and see how we could take your operations to the next level. Contact us today.

ANDRITZ.COM/SEPARATION



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!**

AFRICA

ANDRITZ Delkor (Pty) Ltd. p: +27 11 012 7300 separation.za@andritz.com

ASIA

ANDRITZ Singapore Pte. Ltd. p: +65 6512 1800 separation.sg@andritz.com

AUSTRALIA

ANDRITZ Pty. Ltd. p: +61 3 8773 4888 separation.au@andritz.com

CHINA

ANDRITZ (China) Ltd. p: +86 757 8258 6802 separation.cn@andritz.com

EUROPE

ANDRITZ Gouda BV p: +31 182 623 723 food.separation@andritz.com

NORTH AMERICA

ANDRITZ Separation Inc. p: +1 817 465 5611 separation.us@andritz.com

SOUTH AMERICA

ANDRITZ Separation Ltda. p: +55 47 3387 9100 separation.bra@andritz.com

