



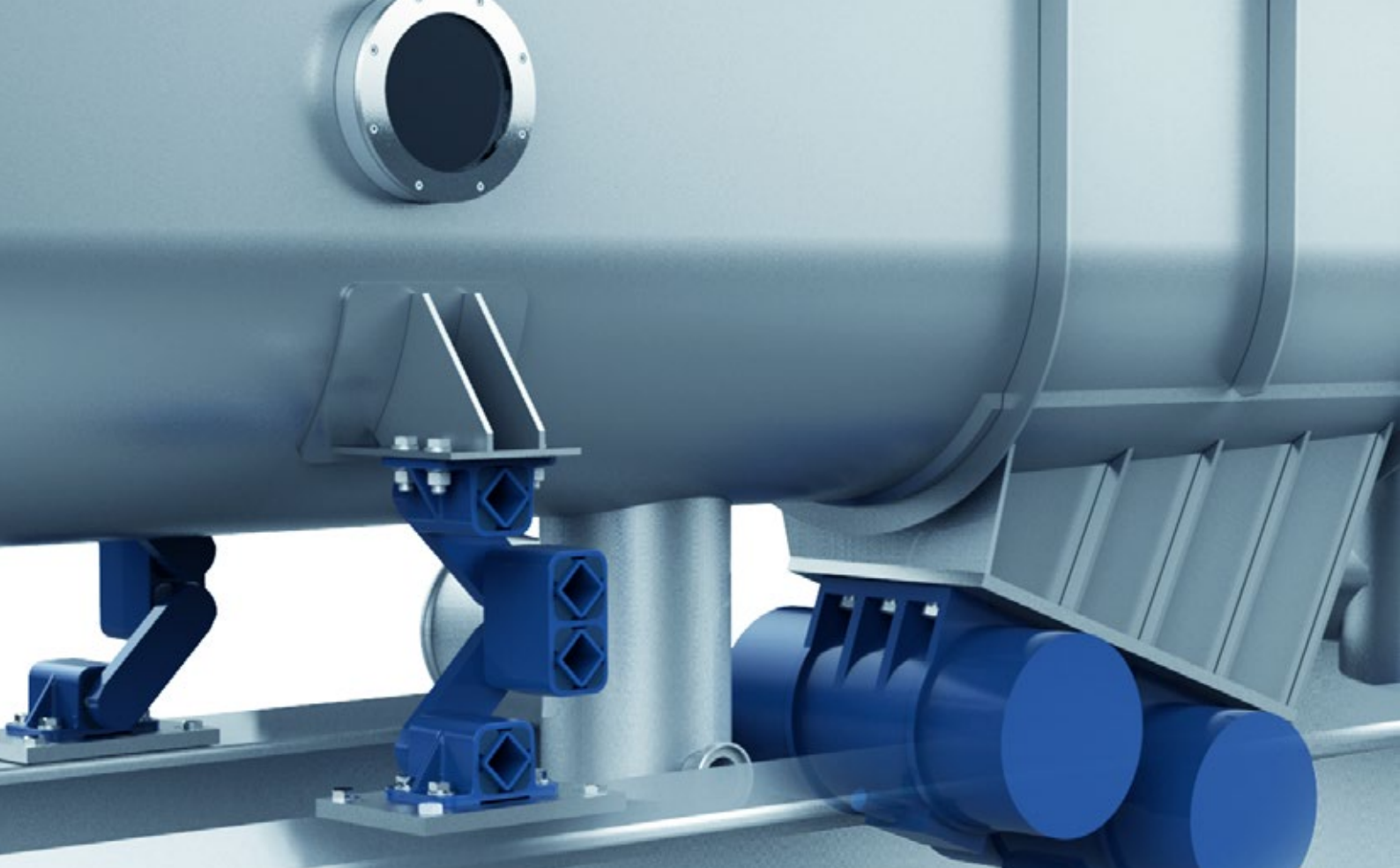
SEPARATION

**RELIABLE TECHNOLOGY
FOR FOOD AND FEED**

FLUIDIZED BED DRYING AND COOLING

ANDRITZ

ENGINEERED SUCCESS



No time left for downtimes or wrong decisions?
No matter whether you are in the chemical,
minerals, feed, or food industry - we have
the expertise to close the gap between your
planning and being ready for operation - fast,
reliable, and accurate. We ensure your peace
of mind so that you can focus on the more
important things.

The optimum drying solution for your process

ANDRITZ Separation was among the first to introduce fluidized bed technology for use in industrial drying. We have been focusing on development of tailored process solutions for our customers since the early 1960s.

With our experience and target-oriented development of process solutions in our pilot plants, we are able to provide you with the optimum solution for your process at any time. Increasing demands on the quality of the final product, such as color, aroma, flavor, handling and storage properties, but also the economy and safety of the production plant determine what is required in drying.

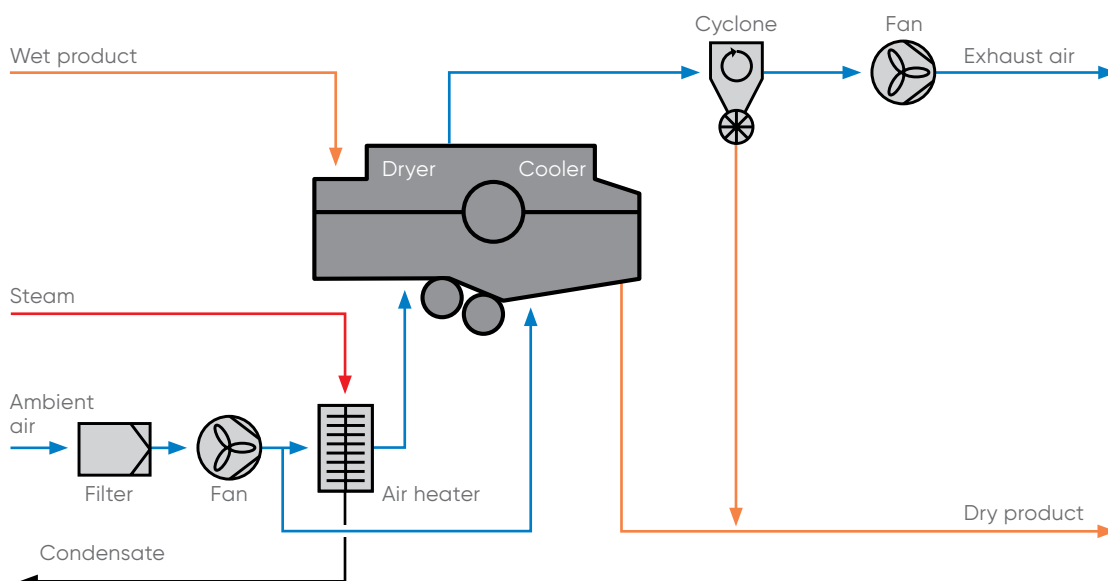
ANDRITZ Separation provides all common types of fluidized beds. Our specialists choose the most appropriate drying process on the basis of the production process and your product's properties.

Vibrating fluidized beds are used for products that are difficult to fluidize or have broad particle size distributions, as well as for fibrous and leafy products.

Stationary fluidized beds are used for products with good handling properties. There are almost no

restrictions on size for these types of dryer. Fluidized beds with in-bed heat exchangers are used for high capacities and evaporation rates. ANDRITZ Separation has set standards for this application. Efficient drying is possible with these systems, also at low heat exchanger temperatures.

Many feed materials derive as solutions, suspensions, or pasty materials. ANDRITZ Separation spray granulation and agglomeration produces granules and agglomerates with individual product properties.



Example for drying and cooling of food

Tailor-made systems to satisfy your needs

Ever since ancient times, drying has been a basic means of stabilizing foods. We already supplied the first fluidized bed dryers for milk powder and lactose more than 50 years ago. Our references now comprise more than 1,300 drying installations, and we have experience from lab and pilot tests for more than 2,100 different materials.

DRYING OF BULK MATERIAL IN THE FLUIDIZED BED

For decades, our fluidized bed drying technology has been setting standards in the food, feed, and nutraceuticals sectors regarding the following:

- Low consumption of thermal and electrical energy
- Gentle drying at low temperature level
- Hygienic design
- Compact design
- Low maintenance effort
- Fully automatic operation
- High safety standard achieved with reasonable safety measures

MAIN APPLICATIONS

- Amino acids and proteins
- Fruit acids
- Milk powder, lactose, casein
- Soy beans and other oil seeds
- Dextrose and sweeteners
- Potato granules
- DDGS and yeast

COMPLETE SYSTEMS

FOR THE FOLLOWING DRYER TYPES

- Vibrating fluidized bed dryer and cooler
- Stationary fluidized bed dryer and cooler (direct heating)
- Stationary fluidized bed dryer and cooler with in-bed heat exchangers
- Belt dryer and cooler



YOUR BENEFITS

- Tailor-made systems to meet your particular needs
- Maximum energy efficiency from optimized process configuration
- Customized product quality
- Low costs over the entire life cycle
- Extensive test facilities to resolve your specific drying challenge
- Market leader in fluidized beds with incorporated heat exchangers



Fluidized bed unit for food applications

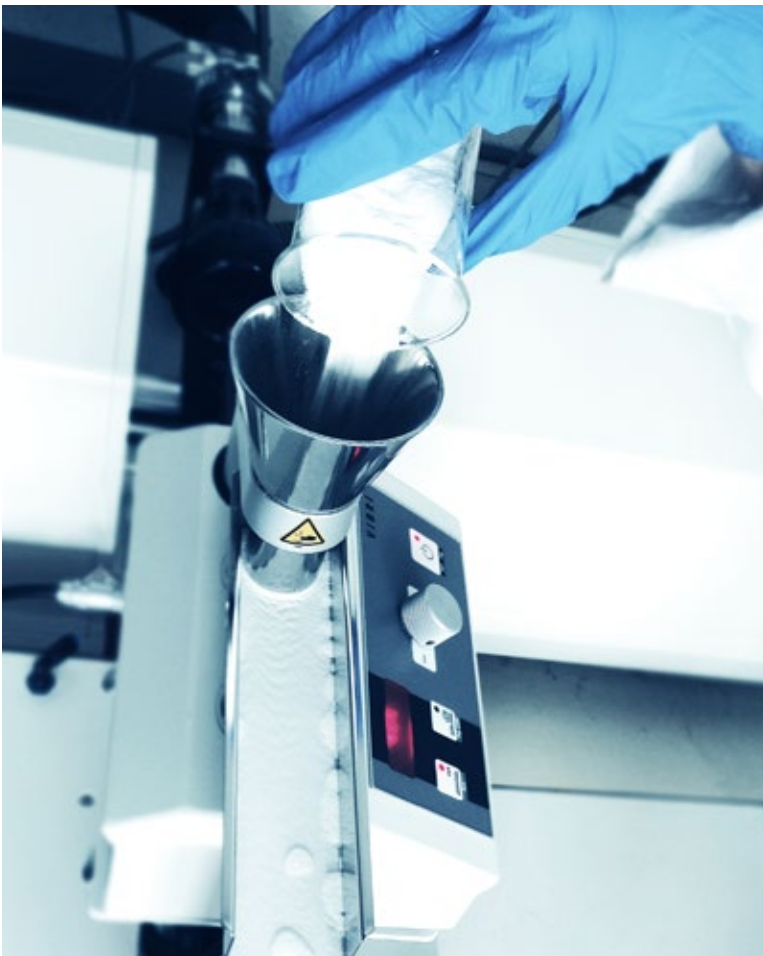
Reliable technology for your peace of mind

SAFETY

Food, feed, and additives are often organic materials. Many of these present a dust explosion hazard. Whether classified according ATEX, other international standards, or local regulations, a reasonable safety standard is sometimes decisive in the economy of the installation. Using of their long-term experience, our specialists chose the safety measures suitable for your installation. Possible solutions are installations resistant to pressure shock, explosion suppression systems, or complete, inertized drying systems.

LAB-SCALE AND PILOT TESTING

Our R&D center with its qualified personnel and integrated laboratory is at your disposal to develop your process or examine your specific tasks.



Main services

Our services include development, planning, design, manufacturing, and delivery of single key-components or complete systems, as well as supervising their installation and commissioning.

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.



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



REPAIRS & UPGRADES



SECOND-HAND & RENTALS



TRAINING



OEM SPARE PARTS



SERVICE AGREEMENTS



PROCESS OPTIMIZATION



LAB AND ON-SITE TESTS





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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