



SEPARATION

**WELL-PROVEN TECHNOLOGY
FOR TECHNICAL SALTS
AND MINERALS**

FLUIDIZED BED DRYING AND COOLING

ANDRITZ

ENGINEERED SUCCESS

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.



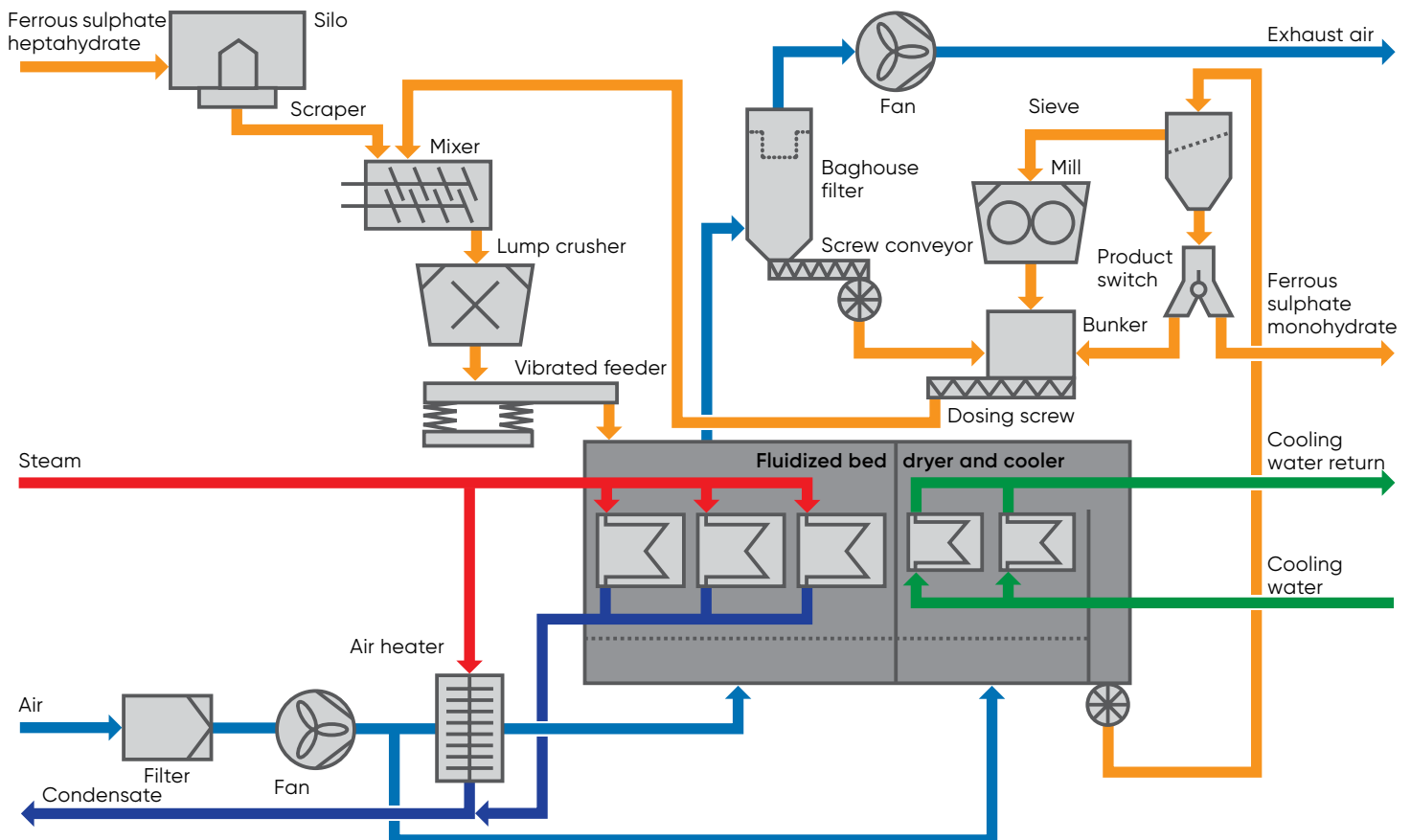
Experience makes the difference

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.

When development work began, only vibrated fluidized bed dryers were used for drying. Nowadays, these are still being used for critical products with wide particle size distributions or higher feed moistures. The development of special distribution plates now enables the use of static dryers without vibration in most cases.

Static dryers have a low maintenance requirement and can be optimized to suit the application in terms of size, shape, and material of construction. The use of dryers with inlet air temperatures of above 500°C or dryers with integrated heat exchangers results in a significant drop in thermal energy consumption. Additionally, a fluidized bed dryer with integrated heat exchangers provides the opportunity to separate the fluidization stage from the

energy supply to the system. This advantage is significant when drying fine and, at the same time, temperature-sensitive products. With our constant and target-oriented product development, we were able to multiply capacity and reduce specific energy consumption.



Drying, calcination and cooling of ferrous sulfate

Expertise for innovative applications

WE SUPPLY

- Competent consulting
- State-of-the-art technology tailor-made for your application
- Energy-optimized solutions with focus on feasibility
- Compact equipment layout
- Solution operating fully automatically for increased reliability
- High safety standard for every customer
- Low maintenance effort and turn-down times

OUR EXPERTISE OFFERS CUSTOMIZED SOLUTIONS BY USING

- De-dusting systems, such as cyclones, baghouse filters, and wet scrubbers
- Hot air systems, such as burners and air heaters
- Feed product formulation with granulation / agglomeration and pelletizing
- Final product treatment with granulation, milling, screening, and mixing
- Closed inert gas loops
- Heat recovery with partial recirculation of the exhaust gas

TYPICAL APPLICATIONS

- Potassium salts
- Sodium salts
- Ammonium salts
- Soda ash, sodium bicarbonate
- Fertilizer (NPK, urea)
- Ferrous salts
- Boric salts
- Metal hydroxides
- Coal
- Ore and sand

COMPLETE SYSTEMS

FOR THE FOLLOWING DRYER TYPES

- Vibrated fluidized bed dryer and cooler
- Stationary fluidized bed dryer and cooler (direct heating)
- Stationary fluidized bed dryer and cooler with integrated heat exchangers
- Spray granulator

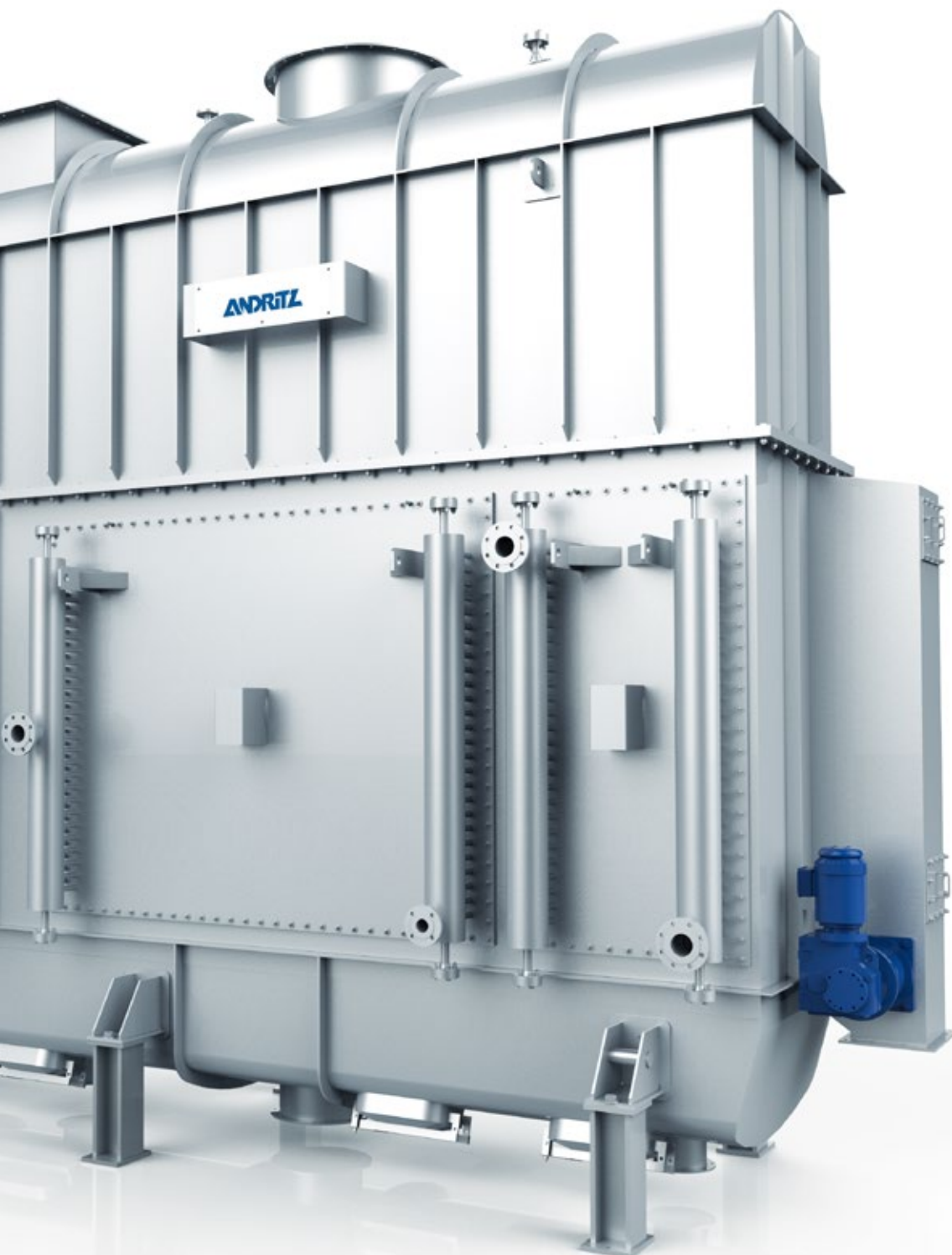


Fluidized Bed Dryer/Cooler for technical Salts



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
- Line capacities from less than 100 kg/h to more than 1000 t/h



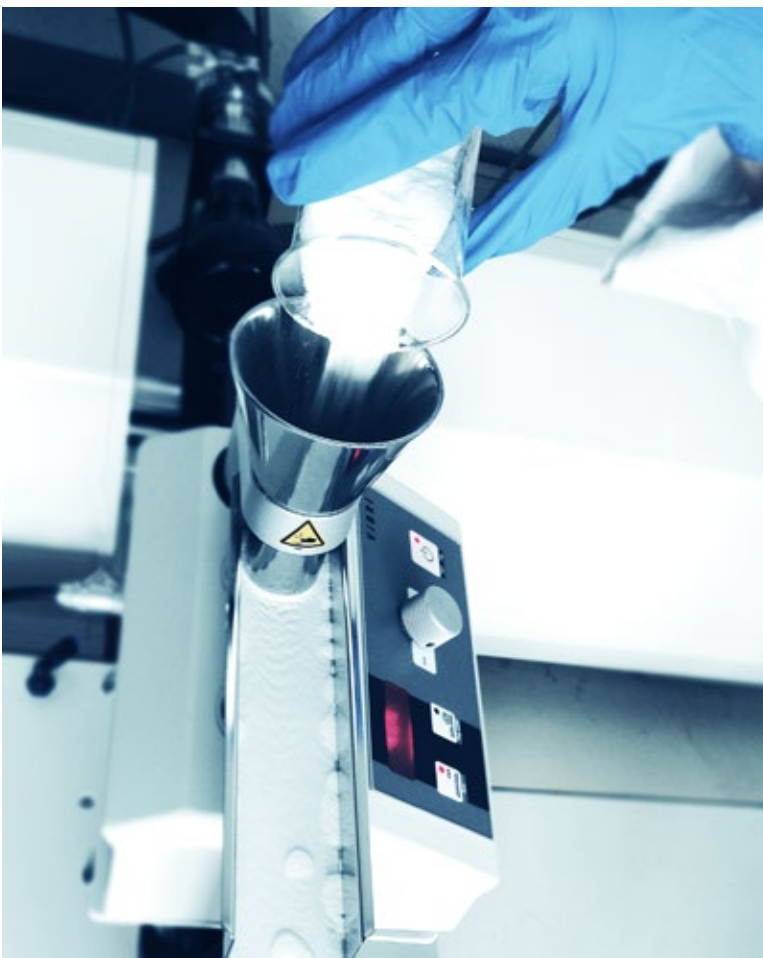
Innovative and safe

SAFETY

Most of the crystalline products and minerals are inorganic products that require strict environmental and plant safety standards during handling and plant operation. By choosing the right de-dusting system or a closed operation under low vacuum, ANDRITZ Separation meets these requirements. Feasible options for flammable products are a pressure shock-resistant design with relief devices, explosion suppression systems, or inertized drying in closed gas loop 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!**

AFRICA

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

EUROPE

ANDRITZ Fließbett Systeme GmbH
p: +49 751 560580
separation.de@andritz.com

ASIA

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

NORTH AMERICA

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

AUSTRALIA

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

SOUTH AMERICA

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

CHINA

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

[ANDRITZ.COM/SEPARATION](https://www.andritz.com/separation)



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