



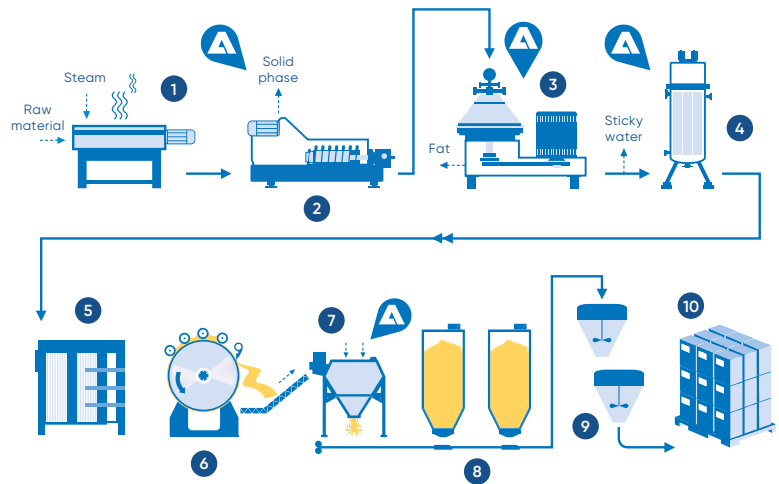
SEPARATION
**INNOVATIVE
END-TO-END SOLUTIONS**
HIGH VALUE ANIMAL PROTEIN

ANDRITZ

ENGINEERED SUCCESS

Innovative production process for high-value protein

The production of animal proteins from skin and soft tissue is a promising trend on the meat market. ANDRITZ has a widespread reputation in the food industry and offers a full range of processing machinery for the production of high-value products. To proactively meet the latest market requirements, we have designed an innovative end-to-end solution that is especially suitable for processing edible raw materials to make protein products for human consumption or pet food. The ANDRITZ meat processing line aligns a decanter centrifuge, a disk stack separator, and a drum dryer into one continuous extraction chain.



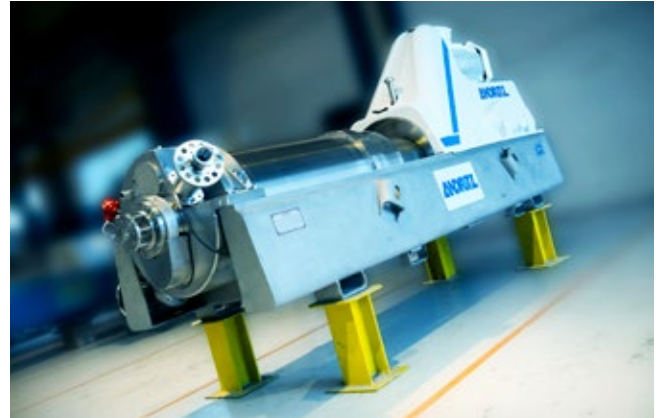
- 1 Heating
- 2 Decanter
- 3 Separator
- 4 Dynamic cross flow filter
- 5 Concentration
- 6 Drum dryer
- 7 Mill sifter
- 8 Storage silos
- 9 Dry mixing
- 10 Packaging

THREE IN A ROW

The processing of skin and soft tissue includes three main processes: dewatering, separation, and drying. The processes must be carried out as gently as possible without strong mechanical or thermal impact, and thus the use of high-quality equipment is of utmost importance. A production chain containing exclusively ANDRITZ machinery is the best guarantee for high-quality protein products.

A CONTINUOUS PROCESS FLOW

Minced raw material is subjected to a short melting process with direct steam injection. The heated slurry then goes into the ANDRITZ decanter centrifuge for fully automated dewatering, separating the solid substance from the liquid. ANDRITZ has revolutionized the drive system for decanter centrifuges. The technology we use for dewatering is protected by worldwide patents. ANDRITZ decanter centrifuges have a compact design in order to reduce space requirements and fit perfectly into the meat processing line. The process liquid from the decanter centrifuge passes to a next separation stage in the ANDRITZ disc stack separator. The temperature is raised to facilitate separation, and high centrifugal forces in the separator split the process liquid into process water and protein substance, such as fat or glue water.



ANDRITZ decanter



ANDRITZ separator

Dewatering, separation, and drying



THE ANDRITZ GOUDA DRUM DRYER

The latter is processed further in the well-known ANDRITZ Gouda drum dryer. The wet product is dried until the required final moisture content is reached – in one single process step without the need for any additional equipment.

The drum body of the dryer is heated on the inside by steam. The steam condenses and the moisture is removed continuously from the drum so that the largest possible surface area remains available for condensation of the steam. Steam heating provides a uniform temperature distribution over the drum surface which results in a consistent product quality. The system is a closed loop. As the drum rotates and is heated on the inside, the product dries on the outside of the drum surface. The brief exposure to high temperature reduces the risk of damage, and the product is also pasteurized while being dried due to the intensive heat treatment.

EXCEEDING EXPECTATIONS

The ANDRITZ meat processing line, including our recognized drum drying technology, not only meets high consumer demands, but also offers many advantages for manufacturers. The end product is a versatile protein powder that can be milled to the required fraction and easily stored in silos.

KEY FEATURES

- Easy production of high-value proteins
- One process flow for an end-to-end solution
- Dewatering, separation, and drying



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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ANDRITZ.COM/SEPARATION



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