

ANDRITZ Feed & Biofuel Technologies

Your experienced partner in feed and biofuel processing

ANDRITZ is a leading global supplier of technologies, production plants, systems, and services to the animal feed, aqua feed, and pet food industries as well as for the biomass pelleting industry.

Key machinery and complete plant solutions

ANDRITZ is a full-range partner and supplier for feed and biomass producers. We offer a simple and efficient "one-stop-shop" concept, which means we cover the entire production process and can supply all of the machines needed in the line. We have decades of experience in designing and building feed and biomass plants, including engineering, installation, start-up service, and commissioning of the plant.

The ANDRITZ concept

Our production lines are based on a full program of well-proven process machinery and equipment in combination with integrated IT solutions that ensure easy operation, high plant efficiency, and full process traceability. All ANDRITZ equipment and solutions take account of the demand for reliable processing, cost efficiency, and uniform, high-quality feed and biomass products.

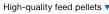
We offer

- Process line solutions
- Unit machines
- Technical consultancy
- Engineering services
- Aftermarket service and support

Together, we make a difference v



Products and plant solutions since the 1960's"







ANDRITZ spare and wear parts warehouses are located at strategic locations worldwide.

ANDRITZ aftermarket

After-sales service and support

At ANDRITZ, we work together with our customers to maximize equipment performance, efficiency, and value over the entire life of your production plant. Our wide range of value-added services is suitable to find the most cost-effective solution for your business.

Your experienced partner

The ANDRITZ aftermarket team stands ready to help you with:

- After-sales services, support, and follow-ups
- Spare and wear parts, maintenance, and repairs
- Process optimization
- Training of plant operators

ANDRITZ 360° customer view

Our excellent aftermarket services and support are what set us apart from our competitors. The customer relationship is extended through important aftermarket service and support.

Wear and spare parts

We manufacture wear and spare parts for the AFBT (ANDRITZ Feed & Biofuel

Technologies) process equipment range, non-OEM process equipment, and engineered spare parts.

The non-OEM parts are manufactured to OEM specification and designed to provide cost-effective solutions. As an extension to our service capabilities, we manufacture and stock a full range of parts at strategic locations to minimize downtime and maintain productivity.

Preventive service

Regular maintenance on a preventive basis has proved to be cheaper than waiting for breakdowns to occur.

ANDRITZ's preventive maintenance program defines daily, monthly, and annual maintenance procedures (e.g. cleaning,



Our pick-up-and-drop service is on the road in selected areas.

oiling, and machine part replacements) to ensure that competencies, resources, and spare parts are available at the right time and in the right place.

We will assist you in planning the annual maintenance work, which includes assessment of maintenance shut-downs, inspections, and on-site repairs.



Aftermarket services

We offer a broad range of aftermarket services, which includes:

- Services, support, and follow-ups
- Spare and wear parts
- Repairs
- Process optimization
- Training of plant operators

ANDRITZ offers a complete portfolio of contract maintenance services. The contracts range from regularly scheduled inspections of key machinery and components to preventive maintenance at pre-arranged intervals (based on operating hours and raw material).

All of our contracts are customized to meet the specific requirements and needs of your plant.

Benefits of ANDRITZ service and maintenance:

- Maximizing production
- Reliability and cost efficiency
- Reduced life cycle costs
- Short and effective shutdowns
- Improved energy efficiency

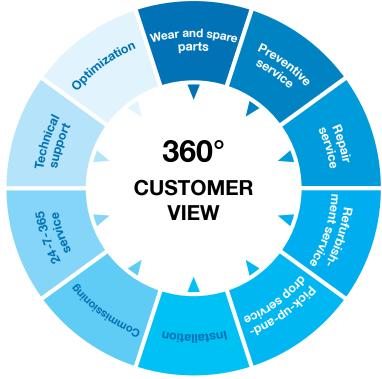
Repair and field services

ANDRITZ offers repair and field services for our customers. We have the ability to repair AFBT process equipment and non-OEM equipment. Our service specialists come to your plant to assist you. The experience of our field service specialists is unmatched. This experience is backed by the full knowledge and technical support that only the equipment manufacturer can provide.

The ANDRITZ service team consists of engineers, electricians, and mechanical experts, with the competences and knowledge to ensure a high-quality service for your equipment. Given the increasing complexity and developments in modern machinery and technology, it is reassuring for our customers to know that our specialists are trained and kept up-to-date on the equipment on a regular basis.

Installation and commissioning

Our team will supervise the installation of AFBT equipment at our customers' sites on request.







We have a broad range of analytical tools, maintenance programs, and repair services to help you reach a cost-effective solution."



▲ Pellet mill maintenance

24-7-365 services

We are able to assist our customers with mechanical services at all times. We have our ANDRITZ engineer-on-call service for service contractors as well as a general call center.

Refurbishment services

At ANDRITZ, we are able to recondition and refurbish selected wear components to the highest quality standards, while ensuring the lowest overall cost of ownership for your equipment.

The workshops are able to refurbish:

- Roll shells
 Roll shell exchange (bearing, sealing, and grease), roll shell grinding, and roller shaft refurbishment.
- Dies
 Die grinding, countersink, and cleaning (washing and bake & shake).
- InternalsPaladin internals refurbishment, PM

shaft refurbishment and bearing exchange (main roller shaft and main shaft).

- Hammer mill rotor
 Disk and drum rotor refurbishment.
- Equipment (on request)
 Overall equipment refurbishment.

We are able to extend the lifetime of your valuable wear components and equipment.

Pick-up-and-drop services

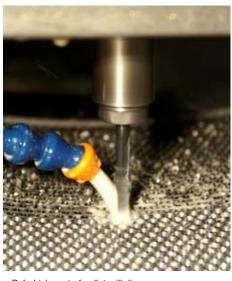
In specific areas, we offer our "pick-upand-drop" service, which includes die reburbishment and rebuilding of rolls. (Please inquire about possibilities in your area.)

Technical support

- Online connection to control system for troubleshooting and maintaining an overview of the process
- Training
- Test center operator training
- Preventive maintenance

Optimization

To achieve higher capacity, better product quality, lower costs, and extended equipment life time, we provide rebuilds, upgrades, and optimization services for installed equipment. We offer assistance in maintenance planning, on-site coordination, and in supervision and scheduling of maintenance work.



▲ Refurbishment of pellet mill die

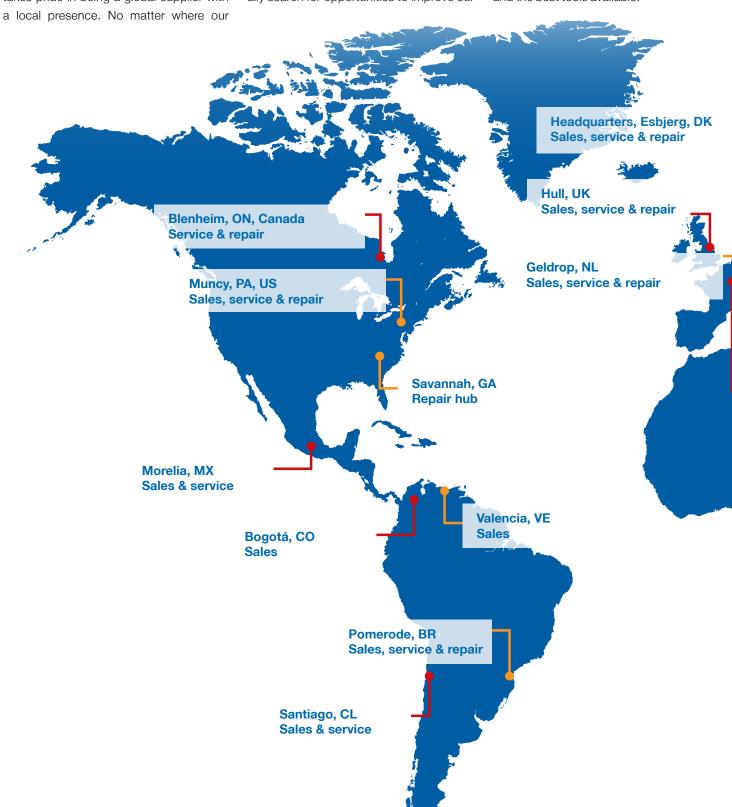
Global Aftermarket

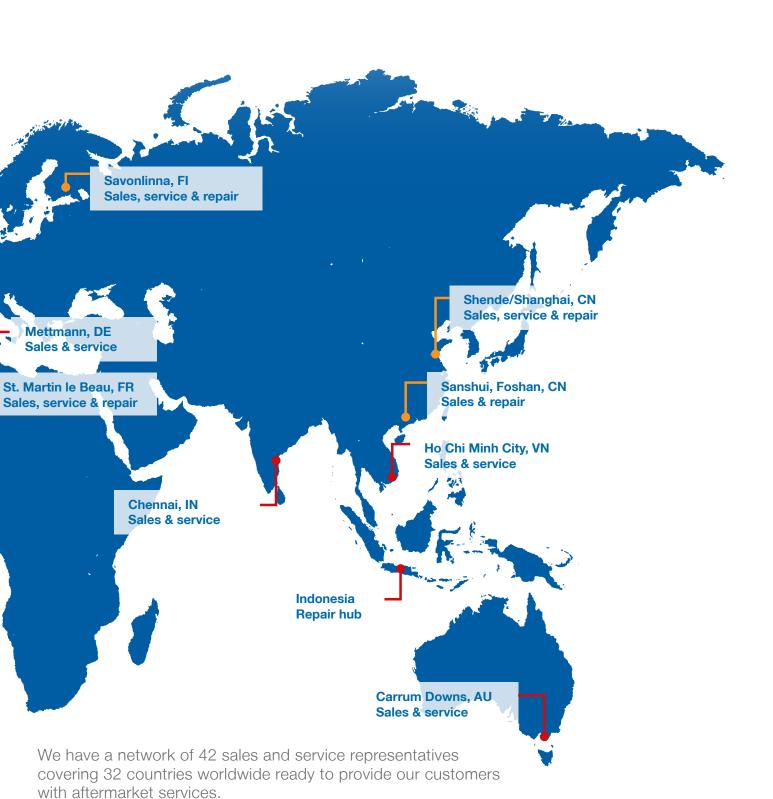
Service and support

At ANDRITZ, we find it important to be represented close to our customers. ANDRITZ takes pride in being a global supplier with a local presence. No matter where our

customer is located, we have local service or repair support nearby. We continually search for opportunities to improve our

global service network in order to serve all clients worldwide with experienced staff and the best tools available.





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Global manufacturing

Equipment, spare and wear parts

Strategic placement of production sites near our customers and markets ensures shorter delivery times.

Geldrop The Netherlands

- Specialized in the wear parts business
- Manufacturing of dies and rolls for all pellet mill brands
- Pellet mill consumables
- Global engineering center for wear and spare parts



▲ Pellet mill die in the making



ANDRITZ is a world market leader for high-quality steel dies, manufacturing 25% of all dies worldwide for pelleting."

Pomerode Brazil

- Multi-divisional manufacturing facility for the ANDRITZ Group
- Manufacturing of key machinery and components







Humenné Slovakia

- Multi-divisional manufacturing facility for the ANDRITZ Group
- Manufacturing of key machinery and components
- Engineering center
- Source for global distribution



■ ANDRITZ CRT conditioner





Muncy, PA, and Savannah, GA United States

- Sales and service center for North America
- Manufacturing of key machinery for feed and biofuel, as well as other advanced process industries
- Refurbishment center







The ANDRITZ team in Muncy, PA, USA ▶

Sanshui China

- Sales and service center for China and Asia
- Manufacturing and engineering center
- Manufacturing of key machinery and components
- Leading manufacturer of high chrome dies in China
- Source for global distribution



Warehouse with ANDRITZ spare and wear parts ▶





Shende/Shanghai China

- Manufacturing and engineering center
- Sales and service center for China and Asia
- Manufacturing of key machinery and components
- Manufacturing of dies and rolls
- Source for global distribution



Our excellent aftermarket services and support are what set us apart from our competitors."



Where to find us

Global supplier - local presence

ANDRITZ is truly a global organization

- but also with local presence. We are represented all over the world. The global market for feed technologies is served from five main locations:
- Esbjerg, Denmark
- Sanshui, Guangdong Province, China
- Geldrop, Netherlands
- Muncy, PA, USA
- Humenne, Slovakia

In addition, we operate from several strategic regional sales, engineering, and service locations in China, Vietnam, India, Australia, Mexico, Venezuela, Brazil, Chile, France, the UK, and Germany - and are also represented locally by agents and distributors in many other markets.



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