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BIOMASS PELLETING TECHNOLOGIES

POWERING SUSTAINABILITY AND EFFICIENCY
WITH ADVANCED BIOMASS SOLUTIONS



ANDRITZ

Market Leader and Partner for All Your Biomass Needs

ANDRITZ's biomass solutions deliver industry-leading efficiency, sustainability, and reliability. As your partner for complete plant solutions, key technologies and processing equipment, we minimize your total cost of ownership through high-efficiency products and optimized processes.

OVER 180 YEARS OF INDUSTRY EXCELLENCE

Choosing ANDRITZ as your partner and solutions provider means benefiting from our extensive industry knowledge, built over 180 years of leadership in wood processing and 40 years in pelleting. Our reliable, high-quality solutions are backed by comprehensive support and expert advice, resulting in smooth project execution. This long-standing excellence solidifies

our position as the world's leading name in biomass processing, providing you with a trusted partner in the industry.

Whether you need an advanced pellet mill, or a cutting-edge grinder, our single equipment options ensure you have access to the best tools to optimize your operations and achieve your goals.

Trusted Market Leader

Over **50%** of biomass pellets in the world are produced with ANDRITZ equipment

Global Impact

Over **350** references around the world

Energy Efficiency

Energy savings up to **15%** with next generation pellet mill, PM30-6



The ANDRITZ Advantage

One supplier, one solution for all your needs

Managing biomass projects is simpler and more efficient with our all-encompassing solutions. By providing a single point of contact for the entire plant lifecycle, we eliminate the complexities of dealing with multiple vendors. From initial design to final operation, we offer streamlined processes and seamless integration for projects of any scale.

Maximize efficiency, minimize costs

Our high-efficiency equipment and processes are designed to significantly reduce your total cost of ownership. By focusing on energy savings, long lifetime of wear parts, and optimizing maintenance procedures, we help you achieve better financial outcomes. This means not only lower operational costs but also greater returns on investment, ensuring your resources are used effectively.

Reliability and safety that stand the test of time

Our commitment to reliability and safety is evident in every aspect of our equipment, processes and support services. We adhere to strict industry standards and incorporate advanced safety features to protect your operations. Efficient project execution, timely delivery, and cost-effective solutions gives our customers the guarantee of consistent and dependable performance, giving you peace of mind for the long term.



World's
No. 1 in Wood
Processing

Tailored Solutions for Every Project

With ANDRITZ, you'll always get quality
and cost-efficiency

Every project has unique requirements, and our solutions are designed to meet those specific needs. Our diverse range of biomass equipment and processes can be customized to fit any challenge for optimal performance and flexibility.

Whether upgrading existing systems or implementing new ones, our adaptable equipment and complete solutions grow with your project, providing efficiency at every stage.

Did you know?

Nearly **5 million tons** of oil annually are replaced with CO₂-neutral fuel produced from ANDRITZ equipment.

Tell us your requirements.
From single units to full plants, we deliver.





Complete Plant Solutions. Understanding You. Standing By You.

We provide complete plant solutions for the biomass processing industry to your exact specifications and with industry-leading cost efficiency by leveraging our extensive processing expertise and experience. AND with the industry's most trusted services, we are always there for you.

STREAMLINED PLANT LIFECYCLE FOR MAXIMUM EFFICIENCY

Our complete plant solutions streamline your entire plant lifecycle for efficiency and reliability. We focus on reducing total cost of ownership through innovative designs and technologies, based on our extensive know-how and experience. Our advanced automation and digital tools boost productivity by enabling smarter, data-driven decisions and reducing variability for dependable, high-quality output.

With a global service team ready to support you, we minimize downtime for continuous operation. Thanks to our experience with various raw materials, you are assured of efficient, compliant operations that consistently meet the highest safety and quality standards.

Choosing ANDRITZ is an investment in a resilient operation supported by a legacy of excellence

ADVANCED EQUIPMENT FOR ALL BIOMASS APPLICATIONS

While we pride ourselves on offering complete plant solutions, we also understand the importance of individual components. Our extensive range of single equipment for biomass processing is designed to meet your specific needs, delivering the same high standards of efficiency, reliability, and innovation that our complete solutions are known for.

Are You Using the Full Potential of Biomass?



**Turn Opportunities into
Achievements with ANDRITZ.**



Experience the Benefits from Our Legacy of Excellence



Comprehensive Integration

One supplier/single point of contact for complete plant solutions, simplifying project management and enhancing coordination.



Cost Optimization

Minimize total cost of ownership (TCO) with high-efficiency parts supply and optimized maintenance.



Global Support

Global service team powered by digital tools that provides around-the-clock support, ensuring seamless operations and quick issue resolution.



Automation & Digitalization

Advanced automation and digital technologies streamline processes, boosting productivity and operational efficiency.



Flexible Solutions

Diverse equipment options tailored to specific needs, ensuring the perfect fit and adaptability for any project.



Long-Term Partner

Long-term partner for services and supply of spare and wear parts with a proven track record of excellency, for consistent reliability and reducing downtime.



Safety Compliance

Advanced safety features and compliance with global standards, providing peace of mind and ensuring worker safety.



Sustainability

Significant energy savings with state-of-the-art equipment. Sustainable technologies that optimize resources, minimize waste and support environmental goals and eco-friendly operations.



Expert Partnership

Leverage extensive industry experience and knowledge, adding value for customers through expert guidance.

Biomass Processing & Pelleting

ANDRITZ manufactures grinding and pelleting equipment for converting wood, wood processing and forest residues, as well as agri residues and energy crops, into uniform, densified fuel pellets for large-scale power and heat generation, residential heating, and use as raw material for further downstream processing.

By densifying wood-based biomass, agro-residues, and energy crops into compressed pellets, density can be substantially increased from as low as 60 kg/m³ to 650 kg/m³, which generates significant savings on transport, storage, and handling, improves safety as well as a variety of other environmental advantages.



Advantages of Pelleting

- Simple handling
- Reduced transport cost
- Better storage capabilities
- Homogeneous fuel of identical standard
- Renewable and sustainable
- CO₂ neutral fuel
- Safe processing and handling

Applications For Diverse Requirements

When it comes to our customers' specific needs, no raw material is too challenging to process with ANDRITZ equipment.



Wood and forest residue

- Sawdust
- Chips
- Logging residues
- Logs
- Bark



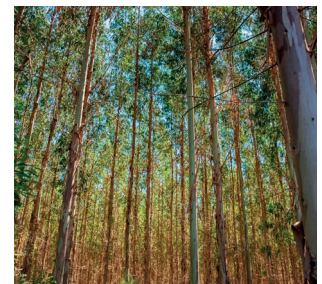
Agricultural by-products

- Rice straw
- Wheat straw
- Rice husk
- Bagasse



Energy crops

- Willow
- Poplars



Plantation crops

- Eucalyptus
- Yellow pine

"At ANDRITZ Feed & Biofuel, we are proud to support our customers to deliver the fuel required to drive the energy transition towards a sustainable future."

Industry Director for Biofuel, ANDRITZ Feed & Biofuel

Raw material sources

- Timber industry
- Sawmills
- Paper industry
- Furniture industry
- Building industry
- Agricultural by-products left in the field or in the processing factory

Process Flow for Wood-Based Biomass Processing

1

PRE-GRINDING SIZE REDUCTION

Wood chips need reduction in an ANDRITZ wet grinder hammer mill system before drying.

2

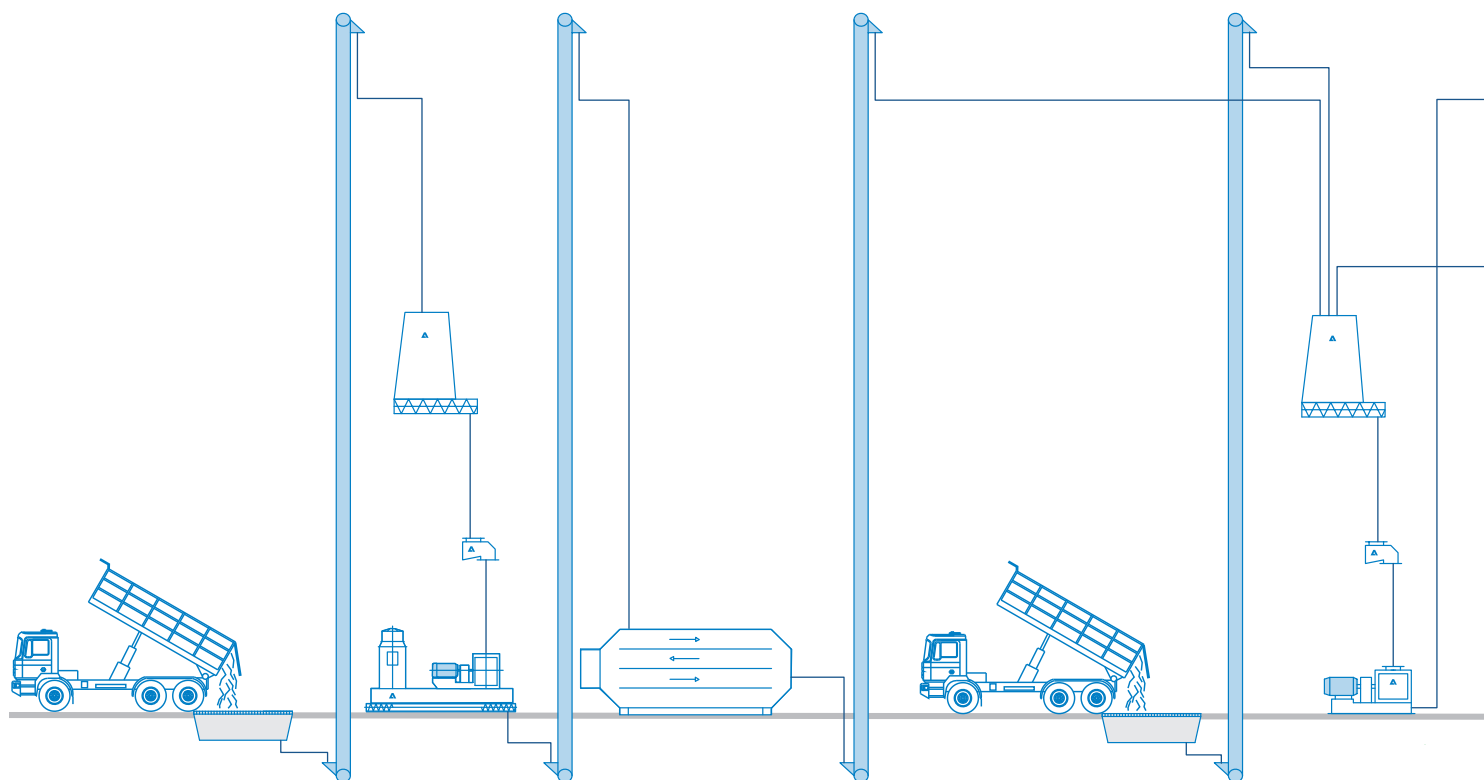
DRYING

Downsized chips, sawdust or shavings are dried to reduce the moisture down to the required level using either a rotary drum or a low temperature belt dryer before the ANDRITZ fine grinder hammer mill system.

3

FINE-GRINDING

The ANDRITZ fine grinding hammer mill system creates homogeneous material ideally suitable for pelleting. Variable hammer speeds are available for optimized grinding, before the material is pneumatically conveyed to a cyclone or filter.



CHIP INTAKE

CHIP
GRINDING

DRYING

SAWDUST INTAKE

FINE GRINDING



4

PELLETING

The ANDRITZ pelleting system provides reliable, efficient, and high-quality pellet production. Based on our diverse range of pellet mills, ANDRITZ matches the equipment to the raw material and required capacity for optimal performance.

5

COOLING

To ensure pellet quality and maximize safety during storage and transport of the pellets, ANDRITZ cooler system reduce temperatures using ambient air. Pellet diameter and cooling time determine the cooler size needed.

6

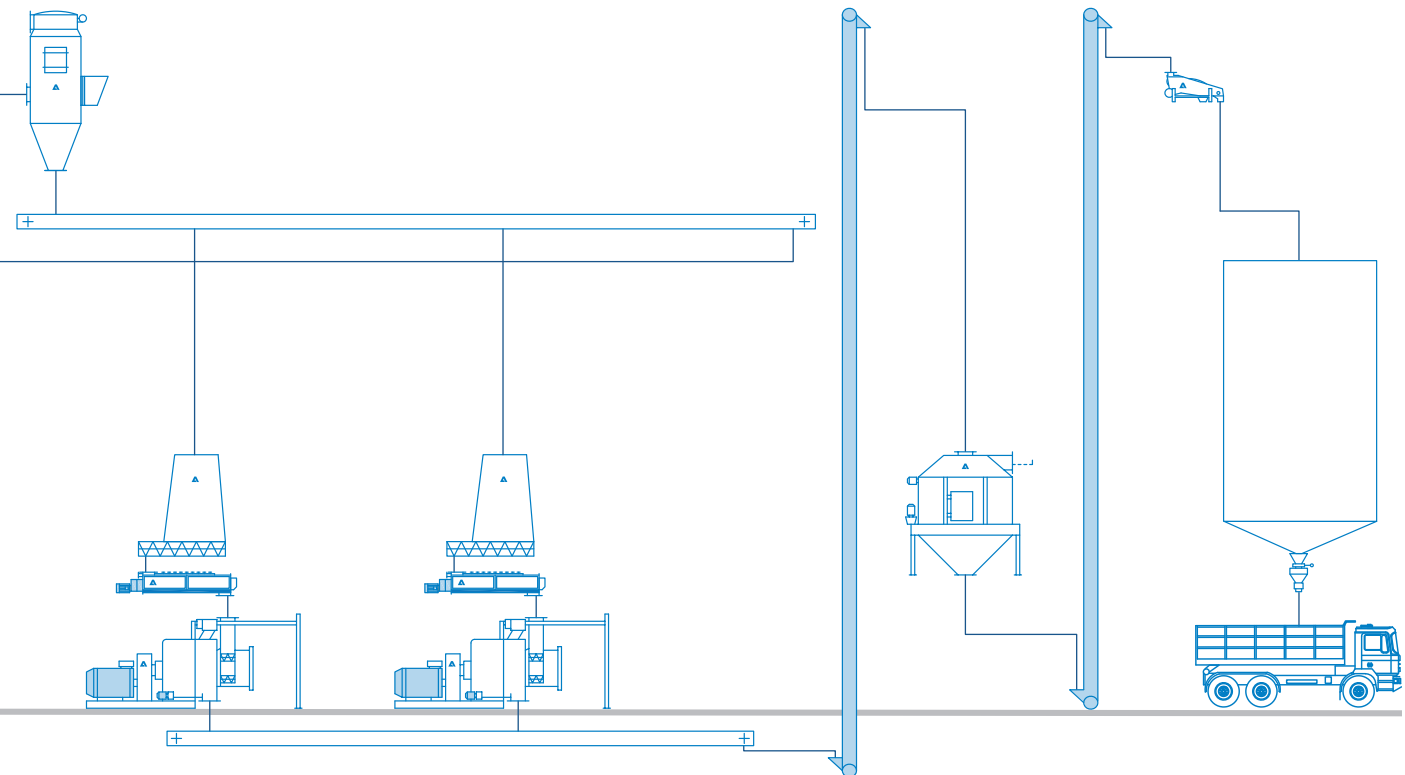
FINAL SHIFTING

Finally, the pellets pass through a sifter to remove fines which get recirculated back into the process. This guarantees the pellets meet the highest quality standards.



AUTOMATION AND DIGITALISATION

Our advanced process control solutions give you full control over operations, delivering maximum efficiency, reduced downtime, and consistent quality. With real-time monitoring and a digitalized dashboard covering all process steps, you can make better decisions and boost productivity for long-term success.



NG

PELLETING

COOLING

SILO /
OUTLOADING



Equipment That Fuels Your Business's Success

Empower your biomass operations with our state-of-the-art machinery, designed for efficiency and reliability at every stage. From initial processing to final production, our equipment ensures seamless performance, maximizing output and minimizing costs.

GRINDING

Multimill B



OPTIMIL



SPROUT 43", SERIES 6



PELLETING

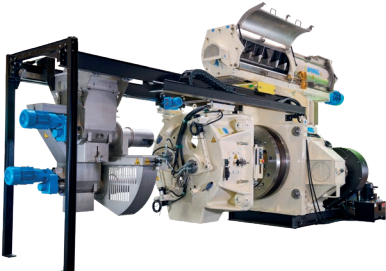
SVPB65



LM



PM30-6



Biomax



Automation & Digitalization

Unlocking a world of possibilities

With ANDRITZ, you will not only keep pace with the industry. You will lead the change towards a future where excellence is the norm.

Our forward-thinking approach boosts your productivity and aligns your business goals with sustainable practices, helping you stay ahead in an evolving industry.

Investing in advanced technology today sets the foundation for long-term success and environmental responsibility.

At ANDRITZ, we guarantee that you're investing in more than just a product. You're partnering with a trusted industry leader, committed to your success by providing tools and results that truly matter.



- System Automation
- Digitalization
- Process Optimization
- Asset Management
- Human Competences



- Output Increase
- Enhanced Sustainability
- Increase Operator Competences
- Decrease Ramp-Up Times

More Than a Service Provider

As your strategic business partner, we're dedicated to helping you thrive in a dynamic world, providing the support and innovations you need to be at the forefront of your industry.

We understand the unique challenges of the biofuel industry to ensure that the support and solutions we provide are personalized and tailored specifically for you.

Extensive expertise in machine creation and deep process knowledge makes us the top choice for wear and spare parts for both ANDRITZ machines and other brands.

We guarantee local presence wherever our customers are, providing personalized and timely local support and worldwide delivery.

We're dedicated to innovation in everything we do, from the parts to complete solutions, ensuring we bring advancements into every aspect of our work.

**360°
SERVICE
PARTNER**

WEAR PARTS SOLUTIONS

SERVICE & REPAIR

SPARE PARTS SOLUTIONS

PROCESS OPTIMIZATION



The Voices That Matter

See what our customers have to say

K2 Biofuels Partners with ANDRITZ to Meet Growing Demand for Sustainable Energy in India

"Using one vendor for comprehensive solutions simplified the process and minimized potential conflicts. Their expertise and comprehensive solutions offer many possibilities for future growth. Our partnership with ANDRITZ is just the beginning."

Mr. Rajpal Yadav, Managing Director, K2 Biofuel

Powering Vietnam's Bioenergy Revolution

"ANDRITZ machines are operating more efficiently and smoothly, and at good capacity. When you use top brands like ANDRITZ, you will feel secure and more confident placing the next order."

Mr. Tuan, Director of HUWOPECO

Delitimers, HRV and ANDRITZ: Teamed-up for Portugal's renewable energy revolution

"Working with ANDRITZ Feed & Biofuel and HRV has been a wonderful experience for the entire team. The vast knowledge provided by both teams is rooted in decades in the industry and is unmatched in our region. Despite the global pandemic and associated challenges, the support we received allowed us to launch the plant within just 18 months."

Mr. Francisco Silva Gomes, Manager, DELITIMBERS

Forssjö Pellets: long-term partnerships = long-term benefits in Sweden

"It is ANDRITZ Feed & Biofuel that has led the innovation, and it is stimulating to work with a company that has this knowledge and experience."

Mr. Erik Gyllengahm, Site Manager, Forssjö Pellet

Boosting efficiency at the world's largest biofuel production plant in USA

"To achieve the highest standards, we need the right people, processes and equipment, but above all, we must have the right partner. ANDRITZ has been by our side since the start. It is a really successful long-term relationship."

Mark Gaddy, Chief Operating Officer, Georgia Biomass

**READ THE FULL
STORIES ON
OUR WEBSITE**





GLOBAL SUPPLIER – LOCAL PRESENCE

ANDRITZ Feed & Biofuel is truly a global organization – with local presence. We are represented all over the world. The global market is served from five main locations in Denmark, China, Netherlands, USA, and Slovakia.

In addition, ANDRITZ Feed & Biofuel operates from several strategic regional sales, engineering, and service locations in Australia, Bangladesh, Brazil, Canada, Chile, Dubai, France, Germany, India, Italy, Mexico, Poland, South Africa, Thailand, Turkey, the UK and Vietnam – and is also represented locally by agents and distributors in many other markets.

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