



FEED AND BIOFUEL

WASTE PELLETING TECHNOLOGIES

TRANSFORMING WASTE INTO
VALUABLE ALTERNATIVE FUELS

ANDRITZ

ENGINEERED SUCCESS

Boost your business

Waste to energy

Producers who rely on ANDRITZ equipment to pelletize forest, energy, and agricultural crops and their residues, the by-products from wood and agricultural industries, municipal waste, and other industrial materials have what it takes to tackle the extreme conditions of biomass, biofuel, and waste pelleting.

The ability to efficiently produce strong, densified pellets that meet rigorous certification standards while also providing substantial savings in transport, storage, and handling, reducing emissions, decreasing waste, and contributing to a greener European economy.

ADVANCED TECHNOLOGIES

We are strongly committed to excellent performance and the quality of our products, thus making us a strong partner for our customers.

CONVERTING TRASH TO TREASURE

Waste-to-energy (WTE) is the process of creating energy using waste as valuable fuel source. Due to changing environmental legislation and the need for alternative fuels, new designs for mechanical and biological treatment of municipal solid waste (MSW) and of commercial and industrial waste (C&I) are being developed all over the world.

Refuse-derived fuel (RDF) is an alternative fuel produced by shredding, sorting and dewatering the light fraction of solid waste. The objective of this concept is to obtain high-calorific and stable material. These fuels can replace fossil fuels in many applications, such as cement kiln plants, steel furnaces, or power plants.



ADVANCED PROCESSES & MACHINERY

- Unit machines
- Technical consultancy
- Aftermarket service and support

ABBREVIATIONS

WTE
Waste-to energy

MSW
Municipal Solid Waste

C&I
Commercial and Industrial Waste

RDF
Refuse-Derived Fuel (RDF) is a fuel produced from various types of waste such as Municipal Solid Waste (MSW), industrial waste or commercial waste.

SRF
Solid Recovered Fuels (SRF) is basically the same as RDF but has a much lower content of MSW ie higher Caloric Value than RDF also caused by lower moisture levels. The SRF is more valuable than RDF but can be used for the same incineration purposes.

Waste: A Business opportunity

Waste by-products are highly valuable! A wide range of materials that are considered waste can be separated from general waste into valuable by-products.. Among many other production processes, pelleting can further increase the value of these products. RDF and SRF, the high energy value fraction of waste, can be pelleted to further increase its value.

WHY PELLETIZE WASTE?

As a part of the pelleting process, loose materials are converted into compact pellets through the application of pressure and heat. Compressing the structure increases its density by a factor of 10. This increase provides advantages in handling and storage of waste, increases energy density and therefore reduces transportation cost.

WASTE PELLETS AS ALTERNATIVE ENERGY

By using alternative forms of energy, it is possible to reduce our dependency on fossil fuels. Waste material mixtures containing products of high calorific value, such as paper, plastic, wood and textiles result in a valuable type of alternative energy, filling a gap in our everyday energy mix required to create heat and electricity.

NEW PRODUCTS FROM WASTE PELLETS

Waste pellets made from pure waste material, such as by-products of another production process are suitable for many types of applications.

Clean plastic pellets are used as an input material for molding new products and by-products of another production process, such as celluloses plastic, can be made suitable for many types of applications.

MATERIALS FOR WASTE PELLETING

- Plastic packaging, PE and PP
- Paper industry rejects, paper, sludge, cardboard
- High-calorific plastics
- Mixed waste - households, industry, & construction
- Wood waste
- Textile, rubber & synthetic material
- Some organic degradable material

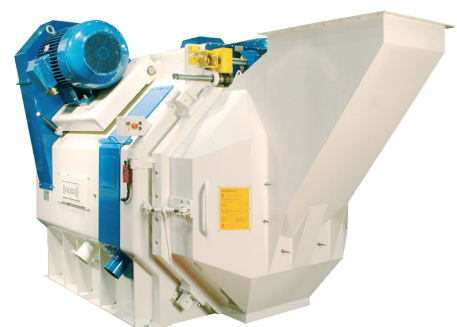
ADVANTAGES OF PELLETING

- Defined product for easy material handling and storage.
- High bulk and energy density reduces transport cost
- Homogenous fuel meeting gasification and pyrolysis requirement for defined high density input material

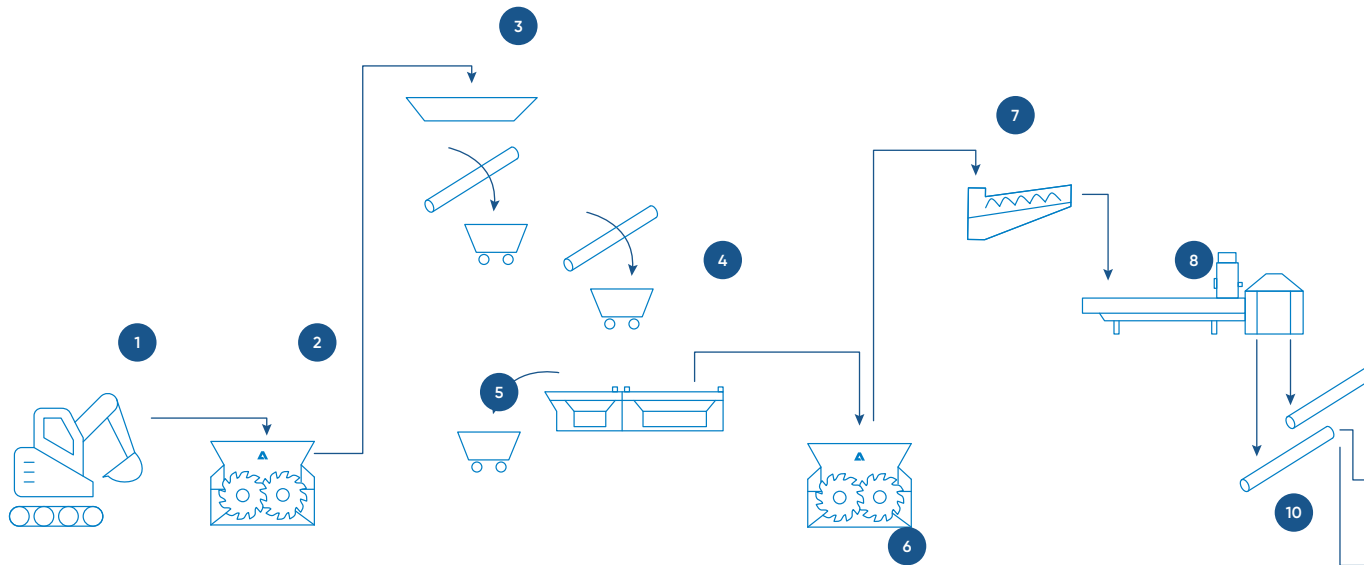
Paladin 2000W



Paladin 3000W



ANDRITZ KEY TECHNOLOGY for RDF & SRF PRODUCTION



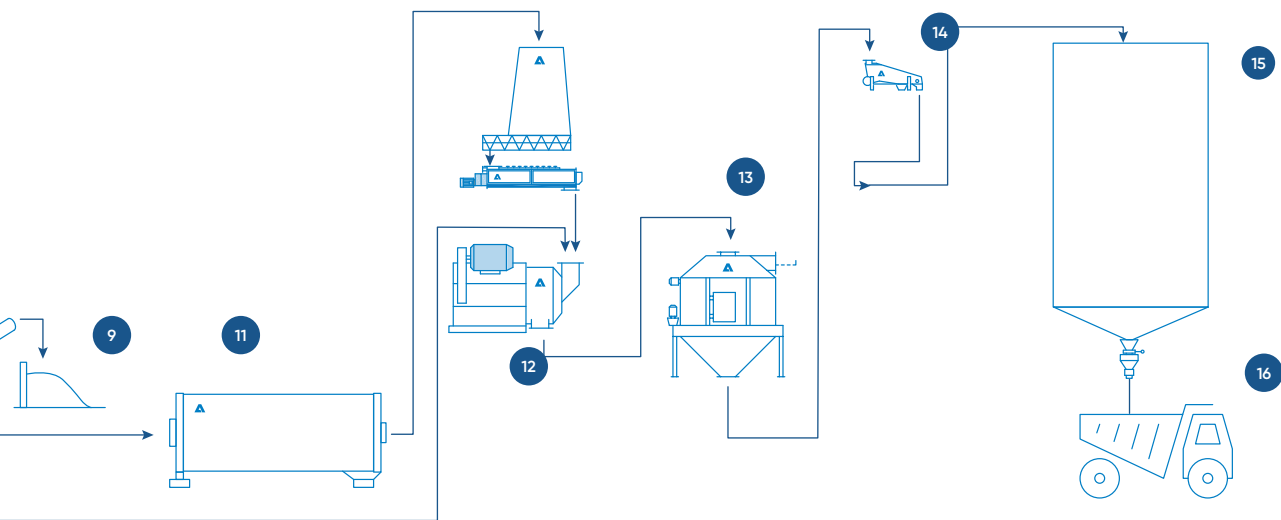
PELLETING

ANDRITZ offers two types of waste pellet mills. Both ensure high output and effective control over pellet quality. The dimensions of these pellet mills have been fixed to withstand great force and come with replaceable wear parts. The level of process control obtained by using ANDRITZ pellet mills ensures high flexibility and optimum energy utilization.

COOLING

The intense friction applied in the die during the pelleting process causes additional heat to develop. Coolers are used to reduce critical temperatures before sifting, packing and storing pellets. ANDRITZ coolers utilize the surrounding air to lower the temperature of the pellets, resulting in a pellet temperature of 5 to 10°C above room temperature. The diameter of pellets and the holding time in the cooler are crucial in determining the size of the cooler needed.





PARATION	BELT DRYING	PELLETING	COOLING	SIFTING	SILO/OUTLOADING
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- 1 Waste loading
- 2 Pre-Shredding w/discharge conveyor
- 3 Fe-removal
- 4 Stone trap or wind shifter
- 5 Sand separation
- 6 Fine Shredding w/discharge conveyor
- 7 Product distributor
- 8 PVC seperator
- 9 PVC separated
- 10 Cleaned product
- 11 Belt dryer
- 12 Pelleting
- 13 Cooling
- 14 Sifting
- 15 Silo
- 16 Outloading

Art Center



ANDRITZ Recycling Technology Center

Discover the ART of Recycling

The ANDRITZ Recycling Technology Center – ART Center for short – is open to recycling customers from almost all industries as well as research and development facilities.

With a total area of 3,600 m², the new ANDRITZ Recycling Technology Center located in St. Michael, Austria, offers the ability to test a wide variety of raw materials on state-of-the-art, industrial sized recycling machines. The new recycling test center is equipped with innovative shredding, drying, and pelleting technology, enabling trials under real plant conditions.

In the new technology center, customers can run tests with their own material or with material provided by ANDRITZ, drawing on the expertise and knowledge of recycling experts. This means that customers can easily plan new recycling projects and investments and also reduce investment risks to a minimum.

Customer tests can be conducted on individual machines with diverse materials and operation parameters to determine proof of capacity and output quality for processed materials. And basic sample analysis can help with the preparation of raw materials for further testing.

YOUR BENEFITS AT A GLANCE

- Fully automated center providing real mill conditions
- Testing of numerous different waste streams
- ANDRITZ technology with latest IIoT features
- Simulation of pre- and secondary shredding, fine granulation and dismantling
- Collaboration with a renowned local university focusing on R&D





GLOBAL SUPPLIER – LOCAL PRESENCE

With sales, service, engineering, manufacturing and production sites located all around the world, ANDRITZ Feed and Biofuel is truly a global organization with a local presence. ANDRITZ is vital to ensuring a reliable global supply of aqua feed, animal feed, pet food, and biofuel. With full process lines accounting for half the world's production of aqua feed and biomass alone, we continuously support leading producers in achieving the highest levels in safety, quality, and control from feedstock to final product.

How can we help grow your business?

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