



Wolfgang Kirchner (left) and Sven Rudnick in front of the tubular belt conveyor that transports the wood waste from the sawmill to the biomass heating plant

— SÄGEWERK KIRCHNER

# Convincing automated wood waste handling system

Last year, the new log yard of Sägewerk Kirchner was put into operation in Radstadt. Rudnick & Enners, Alpenrod/DE, received the order for the wood waste disposal system and the infeed to Bioenergie Radstadt's new biomass heating plant.

✍ Martina Nöstler 📷 Rudnick & Enners (1), Martina Nöstler

"We have had a very good working relationship with Rudnick & Enners for decades. It

was only natural that we would also choose this supplier for the new log yard," Wolfgang

Kirchner, who manages the company together with Norbert Kirchner, explains during a



Robust step conveyors transport the bark to the shredder. Cuttings are fed in from the right



Rudnick & Enners GSA 1.600 shredder with a retractable counter-blade

visit from the Holzkurier. Kirchner was also impressed by Rudnick & Enners's technology and immediately highlights a key advantage of the new wood waste disposal system: "When we still had the old log yard, our employees had to carry out many tasks with wheel loaders. Now, everything is automated, and we need to intervene very little."

### Online fuel processing

In the new log yard, trough chain conveyors empty log cuttings and bark onto sturdy conveyor belts. The latter can be moved in two directions: either left where the material enters the shredder directly, or right where it ends up in separate wood waste bins. "Cuttings and bark can be shredded online, either separately or mixed," Sven Rudnick, managing director of Rudnick & Enners, explains. Furthermore, the shredder can be fed directly with the help of a wheel loader. "We do this with broken or pulp wood," Kirchner adds. Originally, the company only wanted to have one bark mill, and the plan was to bring the cuttings to the sawmill for chipping like before. "Sven Rudnick convinced us, though, that the shredder was the ideal solution for us. Now, we can shred our wood waste into fuel with a single machine. There is a clear process and no unnecessary logistical effort involving additional wheel loader trips," Kirchner tells us.

Rudnick & Enners delivered the GSA 1.600 shredder with a 200-kW motor. The shredder is fed by a sturdy slat conveyor. "The shredder has an infeed width of 1.6 m and produces approximately 80 to 150 steres of fuel per hour, depending on the infeed material and desired grain size," Rudnick explains and adds: "The GSA 1.600 is equipped with a pre-tensioned, adjustable counter-blade. In the event of higher impulse forces, such as those caused by foreign objects, the counter-blade can be retracted. This makes the machine less sensitive to foreign objects." To achieve the highest possible energy efficiency in the different loads between the log yard and external infeed via wheel loader, the shredder is equipped with an intelligent, load-dependent control system and a boost motor. The latter is activated as needed. Fuel processing is almost entirely unmanned.

"Thanks to the automated process, we need virtually zero staff. Compared to before, this is a huge relief and, of course, it also reduces costs for us," Kirchner explains. Furthermore, the shredder can be used to produce fuel for other combustion plants with a reproducible grain size. "We already have customers who practice this. In addition to cuttings, bark and pulpwood, pallets could also be shredded," Rudnick says.

Once it has left the shredder, a 65-m-long tubular belt conveyor from Rudnick & Enners transports the processed material to the downstream biomass heating plant, which is operated by Bioenergie Radstadt – a company owned by Sägewerk Kirchner and Salzburg AG. There, the fuel can be filled directly into the crane's automatic loading bin. "Depending on the fill level of the bin, we also automatically fill

the pre-bin with the help of a mobile conveyor belt," Rudnick explains. The loading of the crane box is synchronized with the infeed system from Rudnick & Enners and, as Kirchner emphasizes, this interface functions smoothly.

### In-house logistics as efficient as can be

"The biggest advantage of automated fuel processing and online transport is that we can focus on our core business. Our in-house logistics have improved significantly since we no longer have to worry about additional wood waste handling. The entire system is as efficient as it can be," Kirchner says with a smile. //

## SÄGEWERK KIRCHNER

Location: Radstadt

Established in: 1978

Managing directors: Norbert and Wolfgang Kirchner

Employees: 30

Cutting: 100,000 m<sup>3</sup>/yr in single-shift operation

Products: raw planed timber, construction timber (formwork panels, slats), planed timber, packaging products, lamellas for glulam, solid structural timber, panels, raw wood for CLT

Sales: 70% in Italy, 30% in Austria



Controlled infeed of the homogeneous material to the heating plant – either into the crane's loading bin or automatically into a pre-bin



With its 200-kW motor, the shredder is also designed for shredding broken or pulp wood



A tubular belt conveyor transports the optimally shredded wood waste from the log yard (right) to the biomass heating plant