



Photo credit: Donausäge Rumlmayr (1), Martina Nöster

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**DONAUSÄGE RUMPLMAYR**

Holzkurier

# High performance saw mill in Enns *upgraded*

A broader range and constant rises in capacity spawned several redevelopments at Donausäge Rumlmayr in Enns, Austria. Last year, Springer Maschinenfabrik extended the log sorter, replaced production line 2's sawmill feed system and fitted a high-quality scanner to the centre-cut sorting line.

Extending the log sorter was a logical step for Donausäge Rumlmayr in Enns because of a growing range of log species, diameters and lengths. "Otherwise, the time taken for resorting and warehouse logistics would have continued to rise and have a negative impact on capacity," explains Rudolf Rumlmayr. As a result, the company wanted to extend the log sorting line and Springer Maschinenfabrik, Friesach, was awarded the contract to do so.

**A rotating disc added to the sorting line**

Rumlmayr now has 130 log-sorting bins. Springer designed a rotating disc to make better use of the existing space and keep distances at the log sorting yard short. "The logs are conveyed on the disc around the curve and into the next line of bins at an angle of approx. 140°," explains Christoph Kerschbaumer, Springer's project manager. In front of the rotating disc, the log gap is cut to zero and then increased again so that the second sorting line only has to operate at the required speed.

In this way, Springer can sort over 40 logs per minute. According to Rumlmayr, the rotating disc has even more advantages: "It operates quietly and doesn't wear out quickly in contrast to a cross transfer system. And the partition means that, if batches are suitable, only one sorting line needs to be operated. It also frees up space that can be used as a storage buffer if required. The log sorting yard's capacity is 200 m/min and Kerschbaumer estimates the rotating disc's feed rate at 180 m/min.

At the same time, Springer replaced one of the two in-feed sections and added a Taylor butt-end reducer at the log sorting yard. The new in-feed section is fitted with the tried-and-tested screw unscrambler, a grading conveyor that makes all the surface of the logs visible by rotating them and the log feeder, which was custom-developed for Donausäge. This in-feed section can send up to 38 logs a minute to the sorting line.



## New sawmill feed system and extension of saw line 2

Saw line 2 was remodelled so that larger diameters could also be processed in Enns. "Our production line from 1997 was very efficient at processing thin trunks, but reached its limits with crown diameters of 36 cm. The larger diameters were only processed on saw line 1," explains Rumlpmayr. The focus on high yield and top performance was maintained.

A new sawmill feed system was also built while the saw line was being extended by Linck. Due to positive experience gained over several decades, the company picked Springer Maschinenfabrik in this case too. "We built most of the new sawmill feed system while the sawmill was running. That was a huge challenge," says Kerschbaumer. The new Springer machinery was fitted in a new building in front of the existing saw mill shop. In November 2020, production on saw line 2 was only paused for five weeks. Sawing was moved in three shifts to saw line 1. At the same time, the new sawmill feed system had to be connected to the Linck line and Linck carried out the redevelopment of the sawing line at the same time.

As a result, crown diameters of over 50 cm can now be processed on the high-performance line. Thanks to trunk-to-trunk debarking, sawing batchwise, or trunk-to-trunk shifting, processing logs with the crown first and then the rest, boosted yield and performance. The design of the machinery increased availability too.

"The logs are fed onto a long cross conveyor, separated with a screw-type conveyor and then transferred to a log haul conveyor," explains Kerschbaumer. The log haul conveyor closes the gap before the debarking stage and then pulls the logs apart again afterwards. This happens on a short space at a debarking speed of 150 m/min. With an extra assembly, the debarker can reduce thick logs so that they all fit through a shaft of a particular size. Microtec 3D measurements are then carried out to identify the diameter and the log position (crown or root end first). Unsuitable logs or broken wood can be ejected into appropriate bins. Two 90° curved conveyors are used to turn the logs with their crowns first for sawing. Springer's control system identifies how many logs there are on the two curved conveyors on the left and right in front of the saw line infeed and synchronises the logs accordingly. This process is carried out using a trough, developed by Springer, which is adjusted to fit the log diameter, therefore minimising the gap between the logs without the need for any extra conveyor or devices to do so. Springer also fitted a waste disposal system underneath the sawmill feed. And finally,



**DONAUSÄGE RUMPLMAYR**  
**Location:** Enns, Austria  
**Founded:** 1974  
**Directors:** Rudolf, Severin and Friedhelm  
**Employees:** 165  
**Timber sawn:** 850,000 cubic metres/Y (2021 target)  
**Species:** spruce, pine, fir  
**Markets:** Central Europe, China, North Africa, Middle East, Japan, South Korea, Australia, US

Springer modified the machinery to include the new Goldeneye 900 scanner in the centre-cut sorting line and added a new high performance log allocator. This feeds the single-board layer tray sorter with up to 200 boards per minute and conveys boards up to 325 mm in width.

### Ready for the future

When planning the machinery, both for the log sorting yard and the new sawmill feed system, the focus was to be prepared for tomorrow's technology. In other words, if they want to, Donausäge Rumlpmayr can add an X-ray scanner to the log sorting yard and a detection system in front of the saw line without having to make any major changes. These steps mean

"Springer came up with good design solutions, both for the log sorting yard and the sawmill feed system."

*Rudolf Rumlpmayr*

that the 2021 sawing target of 850,000 cubic metres can be reached in two shifts. Rumlpmayr is very happy with Springer's performance: "All the ideas work. We're now just making a few final tweaks." //

- 1 Special log sorting yard:** Springer fitted a new rotating disc (A) to accommodate 130 sorting bins, the new sawmill feed system is on the left of the photo (B)
- 2 Above the rotating disc:** the bins on the left are existing ones and the line of bins on the right were added by Springer in late 2019
- 3 The rotating disc** enables significant feed and is much easier than transferring logs crosswise.
- 4 In November 2020** Springer replaced the sawmill feed system during ongoing operations for the most part, the in-feed section is shown on the photo
- 5 After debarking and 3D measurement,** the logs are separated to the right, unsuitable timber can be ejected to the left or at the end
- 6 Logs with the root end first** are separated in feed direction to the right first (A), logs with the crown first on the second station (B)
- 7 The curved conveyor** in front of the saw line also acts as a storage buffer

