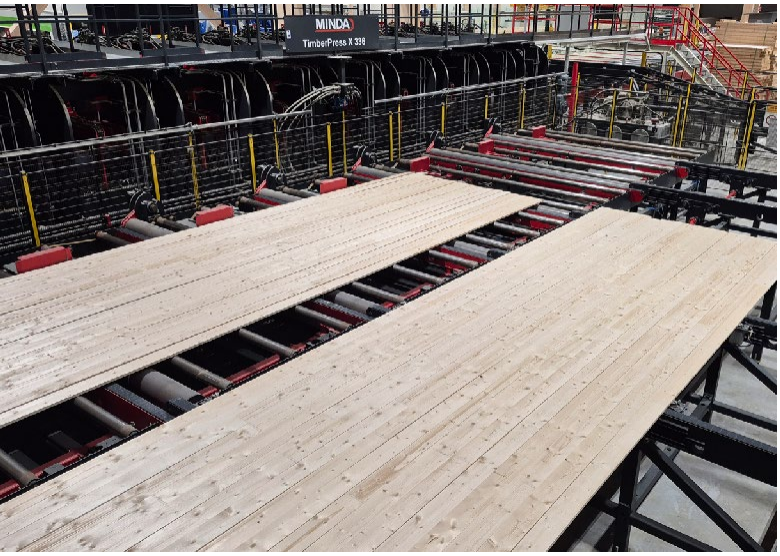
Flexible line for an Estonian CLT pioneer

To take the next development step, Arcwood by Peetri Puit invested in a fully automatic CLT line a few years ago thus replacing the existing vacuum press. In 2020, the company received a production line designed for batch size 1 from MINDA Industrieanlagen.

TEXT: **Jakob Wassermann** /
PHOTOS: **Arcwood by Peetri Put**

The entry into the CLT production of Arcwood took place in 2014. Initially, the Estonian company produced the elements using a vacuum press, but its capacity was limited. "As we saw the potential to increase our sales, we wanted to expand our production capacity accordingly," company founder and CEO Peeter Peedomaa recalls. While searching for a suitable partner, Arcwood found what he was looking for at the German machine and plant engineering MINDA Industrieanlagen, Minden/DE. In 2020, MINDA implemented a new production line. "Arcwood came to us with the desire to take the next step in growth without having to invest huge sums. Together, we developed a customized solution. Peeter Peedomaa's many years of experience and technical expertise made the collaboration extremely constructive," MINDA sales manager Andreas Rudolf reports



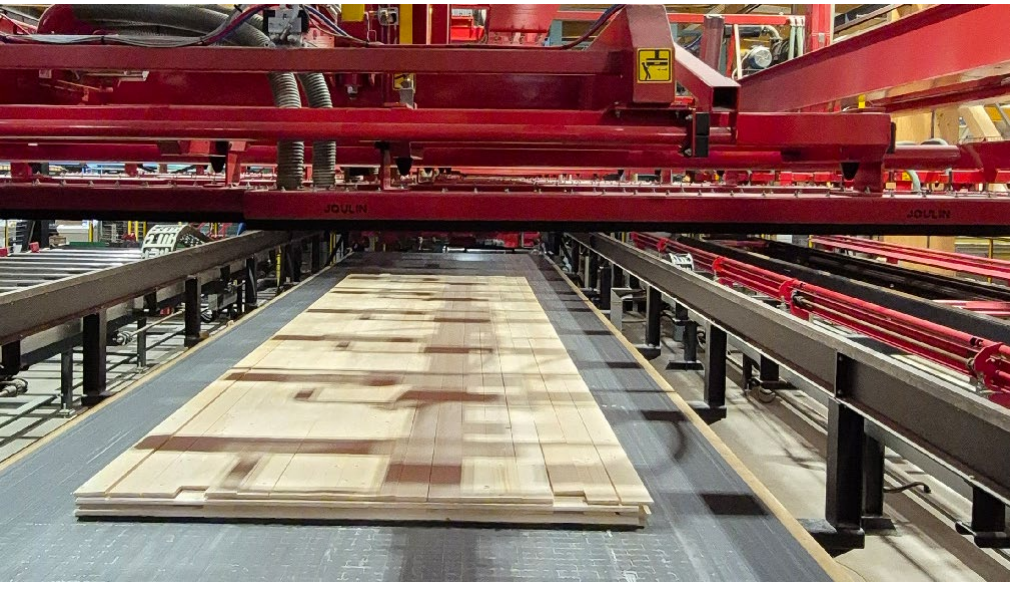
With regard to the press, Arcwood opted for a TimberPress X 336. This press allows the production of elements up to 15.1 m length, 3.6 m width and 340 mm thickness.

Hall extension for the CLT line

"To create space for the new CLT line, we first had to expand our production area. After we had already built a new hall for the CLT production in 2016, a further expansion of 6,000 m2 followed," Peedomaa explains. The glulam beams required for this purpose came from the company's own production.

High degree of automation

Since the beginning of the year, Arcwood has had a new finger-jointing line, which is located directly in front of the CLT production line. The lamellas are now fed directly from the finger-jointer via a roller conveyor. Previously, the lamellas were produced offline on an existing line and fed in stacks of blocks. MINDA also implemented the separation and cutting processes. Behind finger-jointing, the lamellas are divided into length and cross layers and are prepared for layer building. Generous buffer areas are available in front of the laying and gluing area. The layers are built via a vacuum portal. Then the polyurethane glue is applied. The Elastan TLP glue line from Türmerleim is used here. Arcwood does not use narrow-side gluing.



The press cake is then transported to the TimberPress X 336 via a conveyor belt. A panel turner then enables quality control on both sides. Two joinery systems are available for further processing. Elements up to 15.1 m length, 3.6 m width and 340 mm thickness can be produced on the line. The production capacity is 40,000 m³ per year in two-shift operation.

As Arcwood is primarily active in the project business and has its own engineering and planning department, the line was designed for batch size 1 production. It is controlled via the higher-level MINDA production control technology, which is directly linked to Arcwood's work preparation system.

A vacuum portal takes the task to build the layer. This is followed by gluing.