

# Engineered Floors reinvents flooring with Hymmen

Dalton, US-based Engineered Floors disrupts the flooring industry with its Digital Print LVT technology, alongside their technology partner Hymmen.



High-end flooring surfaces produced by Engineered Floors

“LVT reinvented”: This is the opener of Engineered Floors’ latest image video. Using digital embossing technology, a grain structure is built up on the surface of the board, creating an exact texture match to the design. This provides the closest authentic wood look and feel compared to other products on the market.

Each decor starts from real wood, designed with 35 unique plank patterns compared to traditional film products. With high-resolution digital printing, it is possible to achieve sharper details and a vivid colour spectrum. The increased dots per inch (DPI) lead to the High-Def colour clarity, allowing the flooring manufacturer Engineered Floors to create industry-disrupting products.

Engineered Floors emphasised that there is at least five times more colour clarity with the digitally printed products compared to

traditional film products. Additionally, with the flooring product PureGrain, durability is also enhanced.

The flooring offers the realistic look and feel of actual wood: The collection includes modern light looks as well as darker designs. They can be used in any type of room, be it living rooms, bedrooms, and halls as well as in bathrooms, due to their water resistance and durability.

Engineered Floors reported that PureGrain products are 100% American Made, American Sourced and American owned. That includes advantages concerning the fast and easy access to the product — which means there is minimal waiting on international shipping. And the digitally printed directly to a high-density rigid core for high-quality realism is independent of possible international trade restrictions.

## **HYMMEN TECHNOLOGY**

The ability to produce high-quality digitally printed flooring has become strategically important for the future of the global flooring industry. Hymmen has invented technologies for the production and digital decoration of flooring. The developer of flooring technologies entered a technology partnership with i4F, a group of companies providing patents and technologies dedicated to delivering the world’s best and most cutting-edge technologies to the global flooring industry. This includes exclusive licensing rights for all Hymmen’s digital printing patents and technologies for flooring production, such as Hymmen’s Digital Lacquer Embossing (DLE) technology.

The journey of a blank plank to an aesthetic digitally printed LVT product in the Dalton plant of Engineered Floors involves the specialty

of the design and manufacturing professionals of Engineered Floors as well as new equipment, including a Hymmen Digital Printing Line: The JUPITER JPT-C digital single pass machine, a direct print-to-board line is designed for 24/7 industrial production, with printing speeds of 25-50m/min, optical resolution of more than 1,000 DPI, high colour stability and print quality, and high-precision continuous substrate conveyor for maximum register accuracy.

According to Hymmen, the JUPITER line features the DLE technology, creating structures that are embossed-in-register (EIR) to the decor of the surface. This technology grants commercial and technical benefits of digital single pass printing, including flexibility, fast set-up times and individualisation. The digital structuring supports the surface performance. All features like abrasion and scratch resistance, adhesion, and chemical reliability of the core lacquer remain. The whole process build up is UV-lacquer based.

The complete line has a length of 120m overall. It includes a feeding portal, several liquid coating machines for print preparation, the digital decor printer JUPITER JPT-C, coating applications as an abrasion resistance performance layer, the Digital Lacquer Embossing plus (DLEplus), machines for the topcoat application, and at the end of the line, the stacking portal.

The final product stands out with an optimally registered embossing to the printing, resulting in ideal visual and physical depth on the product surface.

### PROJECT MANAGEMENT WITH HYMMEN AND FUTURE PLANS

After the first contact in May 2021 together with the technology partner i4F, a large-scale product evaluation at the Hymmen technology centre in Rödninghausen, Germany started. In November 2021 contracts were signed and the plant project could be realised including the detailed



engineering, production, shipping, and mechanical and electrical installation. The start of production was in August 2023.

"From the beginning of the project the cooperation between the teams of Engineered Floors and Hymmen was very close. Upcoming challenges could be solved easily in the transparent and trustful atmosphere by the involved experts of both sides," emphasised Dr René Pankoke, CEO and managing partner of Hymmen.

"Digital print LVT is the future, and at Engineered Floors, the future is now," said Mike Sanderson, vice-president, product marketing at Engineered Floors. "Our pure grain HighDef LVT is the next generation of hard surface flooring. We will move the industry forward together with this latest innovation."

According to Hymmen, Engineered Floors already plans on widening the Atlantic-crossing partnership by increasing their capacity with the German machine and plant manufacturer. **P**

### LEGEND

- 1 The Hymmen technology DLEplus at Engineered Floors' Dalton plant
- 2 The complete line has a length of 120m overall, including a feeding portal, several liquid coating machines for print preparation, the digital decor printer JUPITER JPT-C, and more