Desktop Metal

Building a greener future through 3D printed wood

FORUST

Forust process and benefits

- The Forust process upcycles waste byproducts from conventional wood and paper manufacturing processes – sawdust + lignin
  - Applying the speed, precision and quality of binder jetting to produce strong, lightweight wood components
  - Re-materializes functional wood to replicate a range of woods colors and finishes (including randomized wood grain)
  - Suitable for a broad range of applications, including home goods, luxury interiors, furniture and architectural accents
- Significant sustainability benefits without sacrificing quality and premium feel
- Manufacturing wood at-scale with digital inventory and cost-effective mass customization
- Sample parts and swatches available online from Desktop Metal at www.forust.com

Forust process and benefits

High-quality materials and finishes

Unlike particle board or laminate, Forust produces 3D printed, digitally rematerialized wood, with grain that flows across the entire part and can be sanded and refinished. The Forust process has the ability to mimic almost any wood grain, from Ash to Zebrano, Ebony to Mahogany.

Streamlined production of complex wood designs

3D printing opens a new design space for wood-based products. Because parts are formed layer by layer without the need for supports, designers can optimize parts and create complex features which would be difficult - if not impossible - to achieve with traditional woodworking methods.

Cost-effective carbon footprint reduction

Forust processes and materials are designed to make it easy and cost-effective for manufacturers to produce sustainable wood parts. The Forust process gives manufacturers a fully sustainable solution at costs competitive with traditional wood manufacturing.

Applications

Luxury interiors

From luxury vehicles to high-end homes, Forust creates sustainable rematerialized wood parts in a wide range of finishes and materials - including rare and exotic grain structures

Consumer goods

Forust expands the definition of how wood can be used in consumer products, allowing designers unprecedented freedom to explore new geometries and applications for an age-old material

Architecture

From the modern to the classic, Forust allows designers and architects to create one-of-a-kind decorative panels and other architectural accents utilizing advanced CAD tools and generative design

Furniture

Forust makes it easy for designers to explore complex geometries for a wide variety of furniture. With cost-effective, tooling-free, production, manufacturers can manage digital inventories and fulfill orders on-demand

Materials and finishes

Wood grains

Parts printed with the Forust process can be finished to mimic a wide variety of wood species. Currently available wood types include natural, oak, teak, and walnut.

Grainless wood

In addition to printing various grain types, Forust can uniquely produce a grainless material - providing a base for further post-processing or a neutral aesthetic for end-use parts.

Custom development

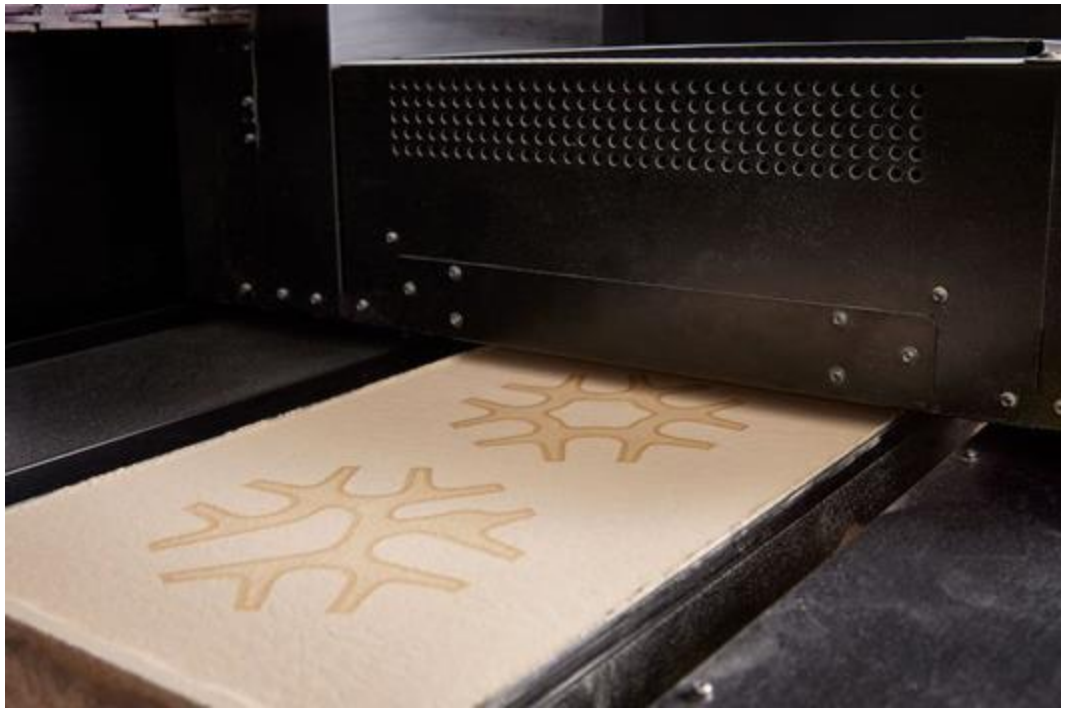
Forust is capable of digital reproduction of rare, exotic and endangered wood species and develop custom wood grains and finishes.

Material properties

Recycled sawdust and lignin

- Flexural Strength: 90 MPa
- Flexural Modulus: 2.3 GPa
- Density: 0.60 – 1.2 g/cm³
  - Engineered densities possible

Small & medium batch production powered by Shop System



The Forust-configured Shop System features a compact, high-speed, single-pass print engine, making it ideal for batch-production of small- to medium-sized wood parts

- Minimal floorspace required
- Build envelope: 35 x 22 x 20 cm
- Throughput: 3 L / hr

Producing sustainable products from wood waste

We believe that responsible material value chains are critical to achieving net-zero carbon emissions, and that additive re-materialization will play an important role in building this sustainable future.

With the power of high-speed, high-resolution binder jet 3D printing, Forust is **giving a new life to a discarded resource** - creating strong, beautiful and carbon-friendly wood products from wood waste