3D Printing Creates Custom Funnels

AM technologies replaces a labor-intensive process with faster, simpler way to produce parts from a more sustainable material.

OVERVIEW

To meet the individual needs of its customers, Bernay Automation produces custom corkscrew funnels that attach to its feeder system for customer-specific parts. In partnership with Forward AM and Sculpteo, the company used additive manufacturing to quickly create interchangeable corkscrew funnels from a strong, sustainable non-metal material. In addition to supplying Ultrasint® PA11, a bio-derived polymer with exceptional toughness, Forward AM shared its 3D printing expertise.

You can read the full use case here: 3D Printed Custom Funnels

QUICK FACTS

Materials:

Ultrasint® PA11

Industry:

Industrial, Assembly and Packaging

Partner:

sculpteo

Technology:

MJF

Bernay Automation, founded in 1982, manufactures feeder systems and provides distribution solutions putting all its expertise at your disposal in flexible and agile 2D and 3D robotic picking solutions.

Bernay Automation manages the distribution of your product so that it is in the right position and at the desired rate on your assembly or packaging line.

Vibrating bowl, plate elevator, conveyor, centrifugal feeder, vibrating platform, or robotic cell integrating a vision system, the solutions are multiple ensuring one will meet your industrial requirements.

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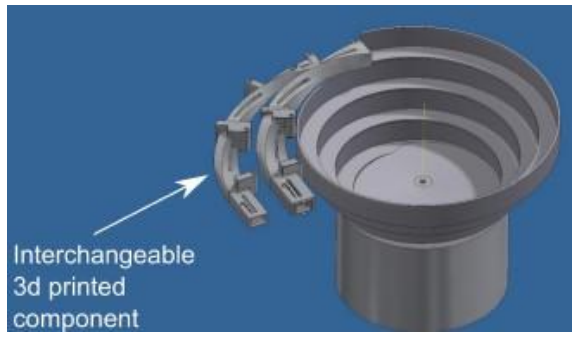
Reduced production timeline from weeks to days

Recyclable and bio-derived material

Challenge: Develop and implement a process to quickly create interchangeable corkscrew funnels from a strong, sustainable non-metal material.

Traditionally, Bernay Automation used molding and welding to produce prototype funnels for its feeder systems. Building these metal tools was labor-intensive and took weeks. Metal funnels are strong and durable, but they're not lightweight. In addition, the traditional manufacturing processes that are used to make them can pose challenges with surface quality and dimensional accuracy. Plastics weigh less and can have a smooth, uniform surface finish, but most polymers can't match the performance properties of metals.

Being committed to energy efficiency and environmental sustainability, Bernay Automation also wished to remain competitive while also achieving greater operational efficiency while accelerating time-to-market.



The solution to Bernay Automation's challenges came in the form of a partnership with Sculpteo and Forward AM. Sculpteo's online 3D printing service provided an alternative to time-consuming, labor-intensive molding and welding. Forward AM's Ultrasint® PA11 polymer powder worked well with Sculpteo's MJF 3D printers and met critical requirements as a replacement for metal.

Ultrasint® PA11 has exceptionally high ductility and impact strength for applications that require durability and toughness. The custom corkscrew funnels that Bernay Automation makes need to handle many parts at a high rate of speed, so Ultrasint® PA11's ability to withstand high mechanical stresses was especially important.

As a bio-derived powder with a CO2 lifecycle assessment, Ultrasint® PA11 also met requirements for environmental sustainability. Plus, using this material enabled the creation of multiple custom funnels that Sculpteo could 3D-print on the same machine. In turn, less energy was needed to produce parts that are lightweight, dimensionally accurate, and have a smooth, uniform finish.

Learn more about Ultrasint® PA11:

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