



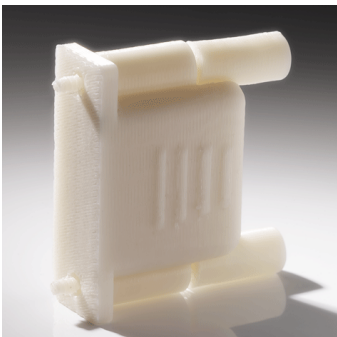
# Shaping Better Business

MIKKELSEN ELECTRONICS ACCELERATES WORKFLOW WITH  
3D PRINTED LOW-PRESSURE MOLDS

*“We now offer new features to show we are monitoring developments and focusing on developing our products. We are considered a more serious player in the market and experience a new and more qualified dialogue, also with new customers.”*

*– Kim Christiansen, Mikkelsen Electronics*

## CASE STUDY



The Fortus 3D Printer produces advanced prototypes of various connector solutions.

Mikkelsen Electronics (Mikkelsen) in Denmark develops customized cable and molding industry solutions. The company invested in 3D printing to reduce production time and cost, and to offer affordable prototypes. From flow simulation design to in-house tooling, Mikkelsen is able to meet their customers' needs.

“We have long been focused on the customer's value chain with regard to low-pressure molding,” said Kim Christiansen, CEO of Mikkelsen. “We use our 3D printers to mold tools for smaller series and to manufacture advanced prototypes.”

## Building Business

Mikkelsen adopted FDM® technology from Stratasys to 3D print precise parts that endure high temperatures. Mikkelsen depends on FDM thermoplastics that withstand high heat for long periods of time. This is an important consideration because Mikkelsen uses Technomelt® hotmelt material. Technomelt is injected into 3D printed molds at low pressure and has a high core temperature.

“The finished parts are fully operational from the outset, giving us far greater credibility with our customers,” said Christiansen.

The investment in 3D printing has also made a significant impact inside the company. Focus on developing the technology in an internal specialist group and communication with clients has reached a new level.

“Dialogue with customers has taken a completely different, but very positive turn,” said Christiansen. “We now offer new features and we are monitoring developments and focusing on developing our products. Additionally, we are considered a more serious player in the market. In fact, our dialogue with customers has changed.”

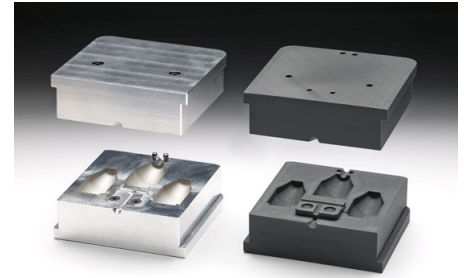
## Low-Cost Tooling

Investing in a robust Fortus® 3D Printer to print both ABS thermoplastic and ULTEM™ resin has proved successful for Mikkelsen.

“Both materials are far cheaper than aluminum and have the potential to reduce our overall production costs. At the same time, our production process is more environmentally friendly,” Christiansen said.

Mikkelsen also added 3D scanning to streamline its workflow even more. After a part is digitized on a 3D scanner, the files are directly transferred to the 3D printer without the need for further processing. When scanned parts require modification, Mikkelsen’s design department handles the changes.

Investing in 3D printing has paid off for Mikkelsen and improved both its internal and external workflows. The business now offers many additional solutions paving the way for new customers.



Mikkelsen replaces aluminum molds with 3D printed ULTEM resin molds to cast Technomelt materials at temperatures up to 200 °C.

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