



Manufacturing & Robotics

With easy-to-use 3D printing, your employees can quickly create custom parts and end-of-arm tooling. These reduce unplanned downtime and increase overall equipment efficiency – without a roll of duct tape in sight.

For more information on how leading manufacturers are maintaining their competitive edge with 3D printing, fill out the form to download our free guide for manufacturers developed in partnership with WeVolver.

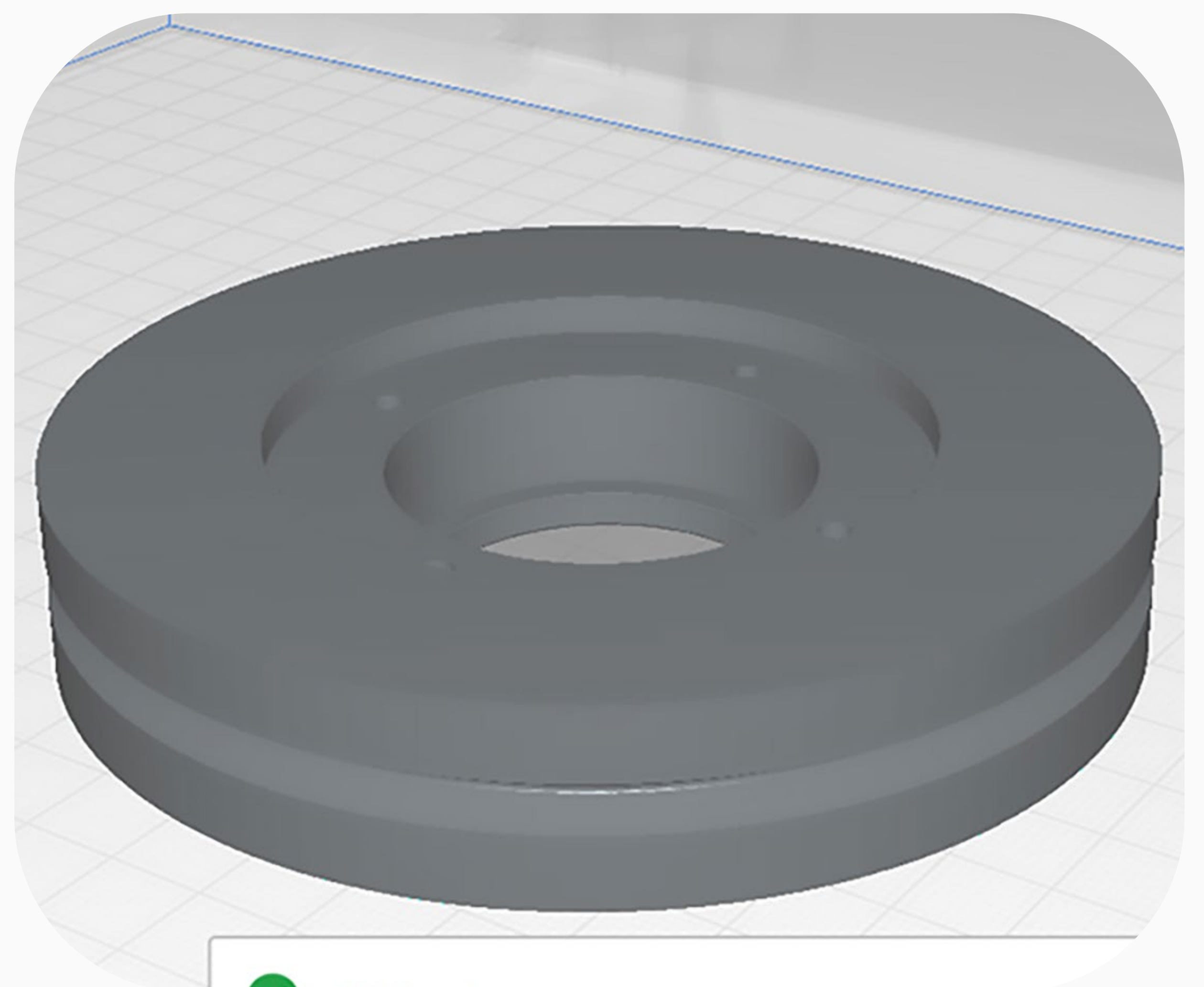
Wire guide roll Production tool

Overview

- High wear resistance
- High cost reduction
- Strong and stiff

Description

This simple guide roller has to withstand extreme loads as it guides a steel wire that is used to cut rubber – in this case for the production of tires. It is therefore an extremely abrasive material that runs over these guide rollers. This requires a special 3D printing material to enable a long service life. In addition, the material must be heat-resistant to withstand high frictional temperatures.



Material	UltiMaker PET CF
Dimensions	150 x 150 x 30 mm
Outsourcing time	2-3 weeks
Print time	19 hours
Outsourcing cost	€ 197
AM material cost	€ 60



High temperature bracket

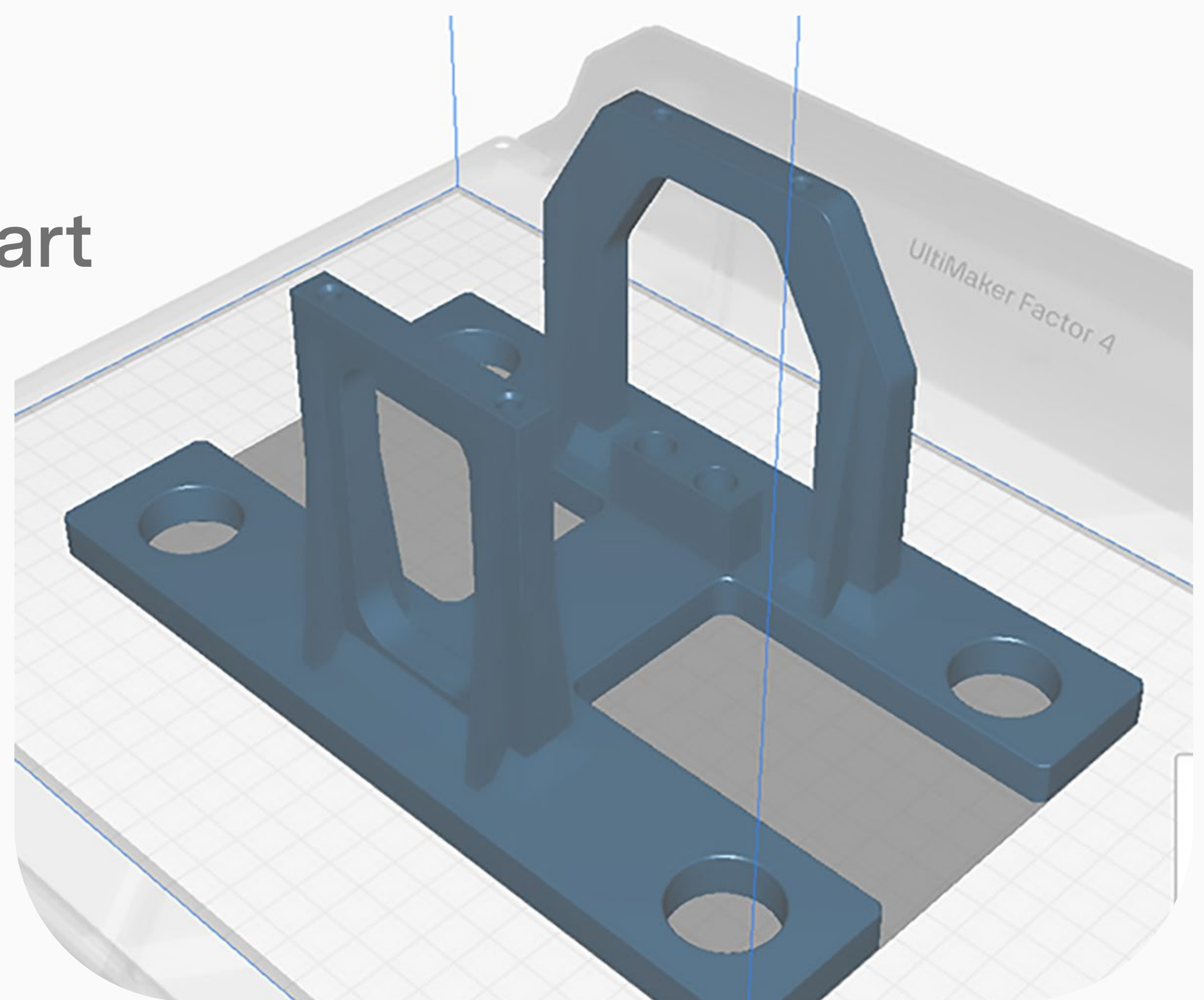
Support tool prototype and end-part

Overview

- High thermal resistance
- Strong and stiff
- High wear resistance

Description

This application showcases going from a prototype to a finished fixture in a single 3D printer. This is made possible by UltiMaker Factor 4 material compatibility and the growing range of new materials in the marketplace. An UltiMaker customer engineered this tool to securely hold components at 140 °C under a 12 kg load for 3 minutes. In use, the PPS CF part has been reliable – even after 5 months of intensive use, surpassing its stainless steel predecessor. Perfect for pre-production runs and small-batch manufacturing, these PPS-CF fixtures can handle up to 1000 units.



Material	UltiMaker Tough PLA and PPS CF
Dimensions	300 x 240 x 200 mm
Outsourcing time	4 - 6 weeks
Print time	28 hours (Tough PLA prototype) 2 days (PPS CF end-part)
Outsourcing cost	€ 450
AM material cost	€ 13 (Tough PLA prototype) € 76 (PPS CF end-part)

Production gauge

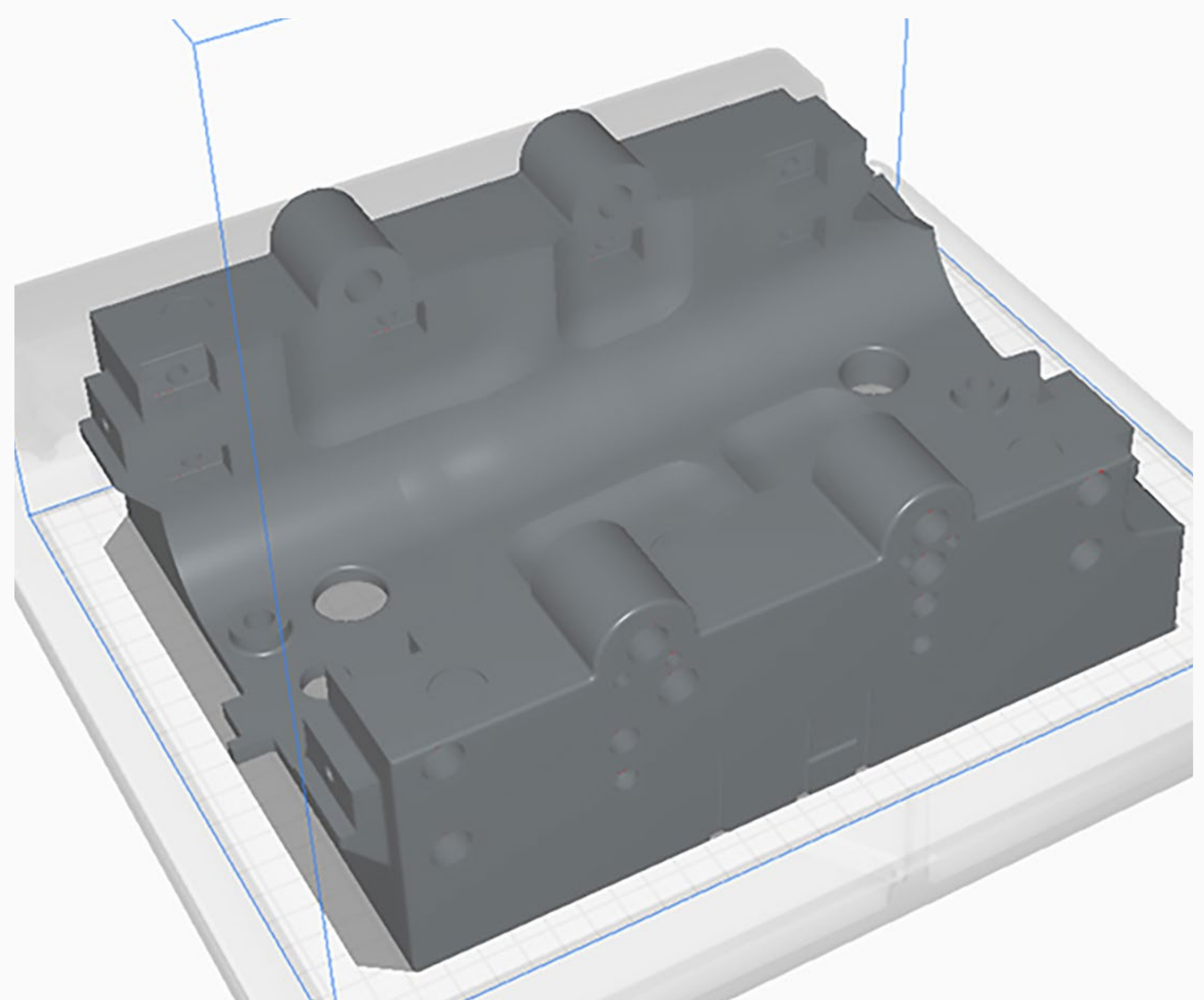
Assembly tool

Overview

- Large component size
- High cost reduction
- Avoids long delivery times

Description

This gauge is used for the assembly of several components and is therefore vital for the accurate production of assemblies. The component was previously milled from aluminum and was very expensive. This meant that the component could cost several thousand euros and a delivery time of at least four to eight weeks was the norm. This is no longer a problem with 3D printing: a new gauge can be created and printed within a short space of time.



Material	UltiMaker PET CF
Dimensions	300 x 210 x 118 mm
Outsourcing time	4 - 8 weeks
Print time	2 days
Outsourcing cost	€ 200
AM material cost	€ 168



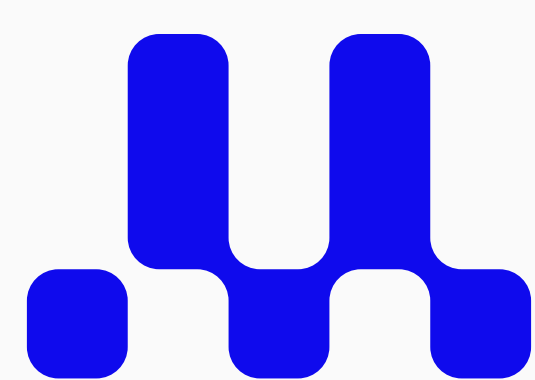


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Scan the QR code to download the UltiMaker Manufacturing & Automation guidebook



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