



Automotive OEM

Use Case – Auto Production Tooling

Customer Profile

This global automotive manufacturer designs and builds a wide range of vehicles from gas-powered and electric cars to commercial trucks. With a strong presence in both consumer and fleet markets, the company continues to evolve its product lineup and production strategy with technology such as additive manufacturing to meet changing industry demands and customer expectations.

Challenge

This OEM uses FDM® technology for product development and tooling within its design and production operations. Although this technology produces durable and accurate parts, the print speed of legacy FDM printers is limited by their level of technology. To keep pace with ever-increasing production demands and schedules, the OEM sought new additive solutions capable of accelerating the production process.

Solution

To obtain the desired increase in additive capabilities, the OEM invested in the F3300® FDM production system. The F3300 embodies the latest developments in FDM technology and can more than double the print speed of legacy printers. Additionally, the F3300 employs a newly designed hot-end (extrusion tip) capable of applying custom toolpaths 50% wider than other printers, contributing to fewer voids and faster print speed. Another time-saving feature includes the F3300's auto-calibration capability, eliminating the time-consuming hands-on calibration required with legacy systems.

Impact

Adding the F3300 to its 3D printer lineup afforded the OEM multiple benefits. Most notable was a significant increase in print speed relative to other FDM printers (see table) – up to 72% faster compared to the F770 printer using custom toolpaths.

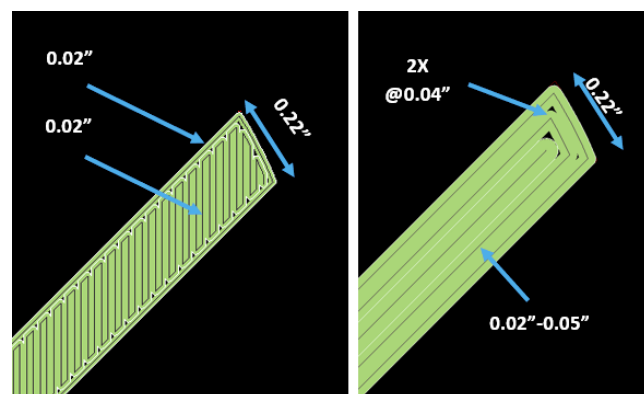
Additional benefits included:

- Ability to meet increased production demand for 3D printed parts
- Lower cost-per-part due to faster print speed, leading to increased throughput
- Stronger parts because of the increased bonding area resulting from wider extrusion paths and minimal voids
- Lower labor costs and enhanced productivity from auto-calibration

As a result of these benefits, the F3300 has become the OEM's flagship 3D printer, setting a new standard for the company's additive technology.



This large 27-inch (69 cm) long production tool was printed on the F3300.



A cross-section of the tool showing the increased extrusion width and fewer voids (right) that are possible with the F3300.

Lower Cost Per Part



Reduced Labor Cost



F3300 Print-Time Comparison With Other Stratasys FDM Printers

	F770	F900	F3300	F3300 using custom toolpath
Time (hrs)	46.5	37.75	25.5	13
ASA Model (ci/cc)	69/175	71/180	71/180	70/178
SR35 Support (ci/cc)	6.5/16.5	7/18	6/15	6/15