

Redefining Resin Distribution®



JABIL





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### What does an open FFF 3D printer cost?

Ultimaker

The cost of open materials FFF 3D Printers ranges from \$2,500 - \$500,000

Most desktop models are in the \$2,000 - \$10,000 range



Machines that print higher temperature materials like PEI or PEEK or even PA6 and PC are in the \$15,000 - \$50,000 range





• What platform (Brand)?

- What technology?
- FFF = Fused Filament Fabrication
  SLS = Selective Laser Sintering
- SLA = stereolithography
- CLIP = Continuous Liquid Interface Production (proprietary)
- What kinds of applications are you using them for?
   Prototype
- JFT = Jigs, Fixtures, Tooling
- Production Parts
  Other
- Would you like to learn more about the FFF and powder materials we offer?

• We've had teams save over 80% on their tooling and fixturing costs using additive, would you be interested in learning if the same opportunity might exist within your operation?





Research and Development 53%

ARE YOU



Production Parts 52%

CURRENTLY

3D PRINTING?



Bridge Production **39%** 



Repair and Maintenance **38%**  Jigs, Fixtures and Tooling **37%** 



- If you purchased a 3D printer, what applications would you use it for?
- Have you seen the use cases by Jabil and VW?
- Are you aware of the advantages 3D Printing can provide?
- Where does your company invest the most in jigs, fixtures, and tooling? Who would be the best person to connect with about this?
- Where are your jigs, fixtures, and tooling fabrications done and what is the average turnaround time?
- How much capacity does your tool room currently have?
   How much additional capacity can the tool room handle?
   What are your future capacity goals over the next 3 years?
- How do you see the future in regards to tool room expertise to support your business growth?
- What are the current costs of your jigs, tooling, and fixtures?





Design for Additive Manufacturing (DfAM) is the art, science and skill to design for manufacturability using 3D printers. Known as additive manufacturing, designing for this process empowers engineers to create more intricate, parametric and generative shapes in production parts, while reducing weight and material consumption.

More DfAM = less manufacturing worries.

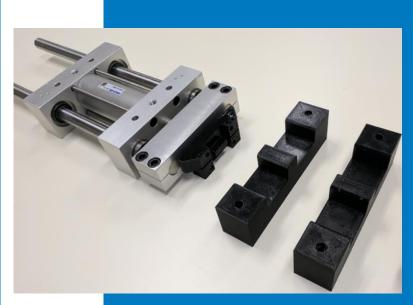
- Design Freedom
- BOM Consolidation
- Reduction of Weight and Materials
- Time and cost efficiency in production runs
- Multi-material prints

## **Jabil Engineered Materials**

- PETg
- PETg ESD
- ABS
- PC FR
- SEBS 85A

- SEBS 95A
- TPU 90A
- Nylon Powder
- TPU Powder

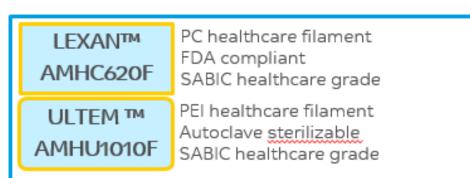
# JABIL













MEDIC

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CYCOLAC™

AMMG94F

LEXAN™

AM1110F

ULTEM™

AM9085F

ULTEM™

AM1010F

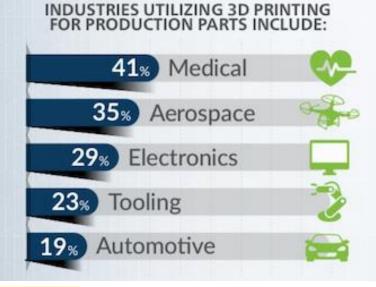
LEXAN™

EXL

AMHI240F

# **PRODUCTION USING 3D PRINTING**

FOR:



ABS filament Low density for lighter parts Easier processing and second operations

- PC filament Toughness and durability Dimensional stability
- PEI blend filament High heat resistance OSU 55/55 - FST compliant

PEI filament Broad chemical resistance High heat, high strength and modulus

PC Copolymer filament Improved impact strength down to -30 °C - UL VO at 3mm flat / on-edge



REPORT THEY EXPECT TO USE **3D PRINTING FOR PRODUCTION** PARTS IN THE NEXT 3-5 YEARS





Filament Producer	Materials Offered	Filament Diameter	Available Colors	Spool Size
JABIL	TPU PETG ABS FR PC SEBS Nylon	1.75mm 2.85mm	Natural Black	Standard 1kg Custom 2kg, 5kg, 15kg
PUSH PLASTIC	PLA ABS PETG PC/PBT PC ASA TPU PMMA Support Material	1.75mm 2.85mm	Black Natural Custom	500g 750g 1kg 2kg 3kg 10kg 25kg 50kg
<b>سابک</b> ےنداہے	Ultem™ PEI Lexan™ EXL Lexan™ PC Cycolac™ ABS Ultem™ Support	1.75mm	Natural Black White	1kg 2kg Specific Refill Model Weights

## **Jabil Engineering Filament**



**Push Plastic Filament** 



Stratasys Fortus™ Classic Refill Cannister



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