

Large Format 3D Printing

Technology: **Fused Deposition Modeling®**



Large format Fused Deposition Modeling® (FDM) brings additive manufacturing to build volumes of several cubic meters, enabling production-ready parts, tooling, and fixtures at a scale that can be difficult or costly to achieve with traditional molding or machining.

With a broad range of material options, manufacturers can match material properties to specific application requirements while benefiting from the speed and economics of additive manufacturing. The result is more accessible, on-demand production of large-scale parts for industries where speed, customization, and material versatility are critical.

Max Build Volume:

1118 x 1078 x 1220 mm (44.0 x 42.4 x 48.0 in)

Typical Tolerances

(Actual tolerances may vary)

0.005 in **Ultra High**

0.007 in **High**

0.010 in **Standard Plus**

0.013 in **Standard**

Extrusion Capabilities

Pellet Nozzle Diameters 0.4-10 mm

Filament Nozzle Diameters 0.4 - 2.0 mm

Standard Finishes

- Sanding
- Primer and painting

Advanced Finishes

- Hand Finishing / filling / sealing / clearcoat
- Primer and painting to mil spec
- Cosmetic Paint / Non – cosmetic paint
- Segmenting/ Bonding/ Assemblies/ Serialization

Post Process options:

- Inserts / Fasteners
- Bonding / nut plates / magnets
- Bonding Gaskets / Spacers / self adhesive tape
- Bonding brackets
- Post process CNC tight tolerances / holes
- Plating

FEATURES:

- **Large build volumes**
Produce oversized parts and tooling in a single print, reducing the need for multiple sections and assembly.
- **Broad material selection**
Supports engineering-grade thermoplastics and reinforced materials designed for strength, heat resistance, chemical resistance and other demanding requirements.
- **High material deposition rates**
Deposits material quickly to produce large parts faster than conventional small-format FDM systems.

BENEFITS:

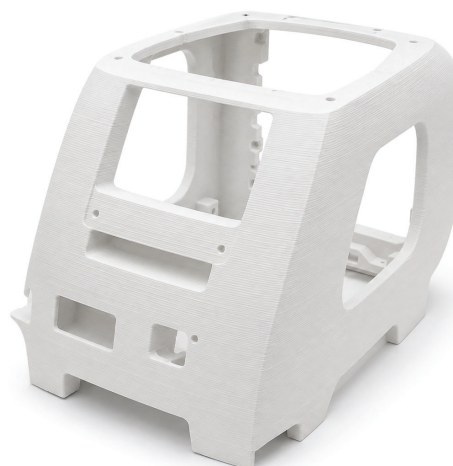
- **Lower production costs**
Reduce tooling, material and labor costs compared with traditional manufacturing methods for large components.
- **Reduced part count and assembly**
Print large, complex components as a single piece to simplify manufacturing and improve part integrity.
- **Faster development and production**
Move from design to full-scale prototypes, tooling and end-use parts in significantly less time.

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Technology: **Fused Deposition Modeling®**

FDM® Material

Multiple major material families → hundreds of base resins → thousands of moldable commercial grade materials for additive manufacturing



FDM® offers a broad and growing range of thermoplastic materials, giving manufacturers flexibility to select the right properties for each application. The technology draws from a diverse portfolio of polymer grades, engineering thermoplastics, reinforced composites, and specialty formulations. As material development continues, manufacturers can choose from options designed for strength, heat resistance, chemical compatibility, flame retardancy, ESD protection, and other demanding performance requirements.

FDM MATERIAL

MATERIAL FAMILY	EXAMPLES	TYPICAL USE
Commodity plastics	PP, PETG, HIPS, TPU, PLA	Housings, containers, general parts
Engineering plastics	ABS, PC, PA/Nylon, POM, PETG, PBT, ASA	Functional/mechanical parts
High-performance plastics	PEEK, PEI, PPS, PSU/PPSU, LCP	High-temp, aerospace, medical
Reinforced materials	Glass-filled PA, CF-PA, GF-PBT, CF-PEEK, CF-ABS, GF-PC	Structural components
Specialty compounds	Flame-retardant, ESD, conductive, lubricated grades	Application-specific parts