



## Durable parts. Repeatable results.

Transform manufacturing with Stratasys® FDM technology.



# 30 years of expertise.

## One leader in FDM.

For manufacturers new to 3D printing and established factory floors alike, Stratasys FDM® 3D printers are the game-changing choice — giving you the ability to build strong, durable and dimensionally stable parts with industry-leading repeatability and reliability. Additionally, our experts are well versed in the multitude of global manufacturing methods and ready to help you find ways to shave days off production cycles, meet industry demands and maximize throughput.

### Start manufacturing efficiencies.

Using production-grade thermoplastics and hands-free soluble support, Stratasys FDM technology allows you to create high-strength tooling, end-use parts and functional prototypes of various complexities faster, with precise accuracy, helping decrease material waste, reduce production costs and increase productivity.

- Offers a broad range of polymer materials
- Delivers more high-performance solutions
- Results are repeatable, reliable and accurate
- Supports connectivity and a smart factory floor

### Get a full production cycle solution.

When you 3D print with Stratasys FDM technology, you get start-to-finish solutions that help you meet requirements and speed up production.

#### Post-Processing Solutions

Quickly meet production demands and application requirements with a wide variety of post-processing techniques, like our hands- and labor-free support removal.

#### Smart-Factory Solutions

Leverage software like GrabCAD Print™ and Insight™ to streamline your CAD-to-print workflow. Integrate your printers into a smart factory floor using MTConnect and Stratasys Connectivity solutions to automate production, see print status, improve decision making and optimize production.

#### Specialist Support

Rely on our dedicated team of application engineers and technical specialists for 3D printing advice and service. Fast response times and on-site support ensure your printers maintain maximum uptime.

#### System Training

We'll provide you and your team with the right training and resources to start accelerating production with FDM materials and printers.

#### Stratasys Direct Manufacturing™

If you need backup or support for overflow part requests, our service bureau can help you get the job done to your specifications.



## Leverage the benefits of a smart factory floor.

Companies embracing Industry 4.0 concepts of automation, on-demand manufacturing and scalable part customization need connected 3D printing solutions that can integrate with their smart factory infrastructure. Stratasys has a variety of solutions to support connectivity, opening the door to new business possibilities. One of those solutions is MTConnect.

MTConnect is a manufacturing data communication protocol that lets you to extract data and information from your printers — as well as other manufacturing equipment — that you can use to assess and optimize your manufacturing operation. This is possible thanks to MTConnect's ability to provide a standard that enables diverse manufacturing equipment to supply information in a common language.

Plus, it allows you to connect Stratasys FDM 3D printers to your existing third-party MES, business intelligence (BI) or enterprise resource planning (ERP) applications and systems to increase 3D printing productivity and efficiency.

# Discover applications for your operations.

## Quick-turn prototypes.

Test and refine parts before moving into full production. Using production-grade FDM thermoplastics, you can quickly make functional prototypes to validate the design of end-use parts. In certain applications, 3D printed plastic parts can replace metal for lighter parts and tools without sacrificing strength and durability. Plus, multi-component assemblies can be built in one print, which helps reduce part count as well as labor time and assembly costs.

## Functional end-use parts.

Print the parts you need, when you need them. With FDM 3D printing, you can get initial production parts into market faster while full-scale mass production capabilities are being established. You can also meet small-order and highly customized end-use part demands quickly without the tool-up costs and long lead times. Plus, 3D printing provides cost-effective, on-demand production that eliminates physical inventory — reducing supply chain costs associated with products at the end of their life cycle.

## On-demand tooling.

Decrease lead times and cut production costs by up to 90% with a digital inventory of on-demand tools. Unlike traditional manufacturing methods, 3D printing gives you the flexibility to create custom tooling that meets your unique production needs. Build strong, lightweight jigs and fixtures that improve ergonomics and operator safety, produce surrogate parts that optimize your assembly line, or design complex tools as one contiguous component — cutting down assembly times and post-build labor.



# Setting the industry standard.

After hundreds of thousands of applications and tens of thousands of factory floor installations, Stratasys FDM 3D printers have set the standard for reliable, accurate 3D printing. They are also a trusted tool of industry leaders in manufacturing around the world.





# Meet demands with **Stratasys.**

Built for the production floor, Stratasys FDM 3D printers give you the ability to create tooling, end-use parts and prototypes for demanding fields such as medical, aerospace, automotive, government, military, consumer products, medical equipment and more. And using the materials you're familiar with as well as other standard and engineering-grade thermoplastics, you can tackle applications that require tight tolerances, toughness and environmental stability as well as specialized properties like electrostatic dissipation, translucence, biocompatibility and more.



## **F370™**

The F370 enables you to produce complex parts with flexibility and accuracy. It includes a Fast Draft mode for truly rapid printing as well as soluble support for full design freedom and hands-free post-processing. It's designed to shorten your product development cycle and keep you ahead of the competition.

**Ideal for:** prototyping and tooling

### **Key features:**

- 7 materials (standard and engineering-grade)
- 355 x 254 x 355 mm (14 x 10 x 14 in.) build envelope
- Connectable to manufacturing execution systems



## **F770™**

When you need to print large parts or lots of smaller parts, rely on the F770's generous capacity to get the job done. With 13 cubic feet of build volume, the F770 offers large-format printing in an affordable, easy-to-use platform, backed by the proven reliability and consistency of Stratasys FDM technology.

**Ideal for:** manufacturing tooling, prototyping and limited-run end-use parts

### **Key features:**

- 2 materials (standard grade)
- 1000 x 610 x 610 mm (39.4 x 24 x 24 in.) build envelope
- Connectable to manufacturing execution systems





## Fortus 450mc™

Helping speed up design cycles and reduce time to part, the Fortus 450 produces highly reliable and repeatable results with no guessing involved — lowering costs. It's also a flexible and intuitive solution for a wide range of applications and industries thanks to its broad set of high-performance materials.

**Ideal for:** prototyping, end-use parts, tooling and production parts

**Key features:**

- 14 materials (standard, engineering-grade and high-performance)
- 406 x 355 x 406 mm (16 x 14 x 16 in.) build envelope
- Connectable to manufacturing execution systems



## F900™

With the largest build chamber available among Stratasys FDM printers, the F900 provides the highest performance, speed and throughput. Its large build volume and proven accuracy provide the consistent results needed to meet production demands while the diverse material selection of engineering-grade thermoplastics allows you to 3D print in a range of applications.

**Ideal for:** prototyping, tooling and production parts

**Key features:**

- 16 materials (standard, engineering-grade and high performance)
- 914.4 x 609.6 x 914.4 mm (36 x 24 x 36 in.) build envelope
- Connectable to manufacturing execution systems

# See the specs.

Product Specifications	F370	F770	Fortus 450mc	F900
<b>System Size and Weight</b>	1626 x 864 x 711 mm (64 x 34 x 28 in.)  227 kg (500 lbs.) with consumables	1,752 x 1,244 x 1,955 mm (69 x 49 x 77 in.)  1450 lbs (658 Kg)	1,295 x 902 x 1984 mm (51 x 35.5 x 78.1 in.)  601 kg (1325 lbs.) without crate	2,772 x 1,683 x 2,027 mm (109.1 x 66.3 x 78.1 in.)  2,869 kg (6,325 lbs.)  2,772 x 1,683 x 2,281 mm (109.1 x 66.3 x 89.8 in.) with manufacturing light tower
<b>Build Tray Dimension</b>	355 x 254 x 355 mm (14 x 10 x 14 in.)	1,000 x 610 x 610 mm (39.4 x 24 x 24 in.)	406 x 355 x 406 mm (16 x 14 x 16 in.)	914.4 x 609.6 x 914.4 mm (36 x 24 x 36 in.)
<b>Achievable Accuracy*</b>	Parts are produced within an accuracy of +/- .200 mm (.008 in.), or +/- .002 mm/mm (.002 in./in.), whichever is greater.	Parts are produced within an accuracy of +/- 0.254 mm (+/- 0.010 in.) or +/- 0.002 mm/mm (+/- 0.002 in./in.), whichever is greater.  Z part accuracy = +/- 0.200 mm (+/- 0.008 in.) or +/- 0.002 mm/mm (+/- 0.002 in./in.), plus 1 layer height	Parts are produced within an accuracy of +/- .127 mm (+/- .005 in.) or +/- .0015 mm/mm (+/- .0015 in/in), whichever is greater. Z part accuracy includes an additional tolerance of -0.000/+slice height.	Parts are produced within an accuracy of +/- .089 mm or +/- .0015 mm per mm, whichever is greater (+/- .0035 in. or +/- .0015 in. per in., whichever is greater). Z part accuracy includes an additional tolerance of -0.000/+ slice height.
<b>Network Connectivity</b>	Wired: TCP/IP protocols at 100 Mbps minimum 100 base T, Ethernet protocol, RJ45 connector; Wireless-ready: IEEE 802.11n, g, or b; Authentication: WPA2-PSK, 802.1x EAP; Encryption: CCMP, TKIP	Wired and wireless (with USB dongle) network interfaces using standard TCP/IP protocols at 100MBPS minimum.	10/100 base T connection. Ethernet protocol.	10/100 base T connection. Ethernet protocol.
<b>Operator Attendance</b>	Limited attendance for job start and stop required.			
<b>Power Requirements</b>	100–132 V/15A or 200–240V/7A. 50/60 Hz	3 phase, 208V, 30A, 5 wire, 47-63Hz frequency	208 VAC (3 phase), 50/60 Hz, consumes 18 Amps	230 VAC (3 phase), 50/60 Hz, consumes 40 Amps
<b>Additional Requirements</b>				Compressed air required 90-120 psi with a minimum flow of 20 CFM
<b>Regulatory Compliance</b>	CE (low-voltage and EMC directive), FCC, RCM, EAC, cTUVus, FCC, KC, RoHs, WEEE, Reach	CE, cTUVus, RCM, EAC, FCC Part B	CE, cTUVus, RCM, EAC, FCC Part B	CE, cTUVus, RCM, EAC, FCC Part B

\* Accuracy is geometry-dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield.



Product Specifications	F370	F770	Fortus 450mc	F900
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**Software Compliance** All Fortus® family systems include Insight and Control Center™ job processing and management software. Compatible with GrabCAD Print for use with job reports, scheduling and remote monitoring.

<b>Operating System</b>	Windows 7, 8, 8.1 and 10 (64bit only) with a minimum of 4GB RAM (8GB or more recommended).	GrabCAD Print - Windows 10, Windows Server 2016. Requires a 64-bit operating system.  Insight – Windows 10, Windows 8.1, Windows 8, Server 2016. Requires a 64-bit operating system.	Microsoft Windows 10 (Pro, Enterprise, Education), Microsoft Windows 8.1 and Windows 8 (Pro, Enterprise), Microsoft Windows 7 (Pro, Enterprise, Ultimate), Microsoft Windows Server 2012 R2. Insight software requires a 64-bit operating system.	Windows 10 and newer, Windows Server 2016 and newer. Only 64-bit versions of Windows are supported.
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Available Materials					
Layer Thickness	0.508 mm <sup>1</sup> (0.020 in.)	0.330 mm (0.013 in.)	0.254 mm (0.010 in.)	0.178 mm (0.007 in.)	0.127 mm (0.005 in.)
ABS-ESD7™	○	○	●	●	○
ABS-M30™	○	●	●	● <sup>1</sup>	● <sup>2</sup>
ABS-M30i™	○	●	●	●	● <sup>3</sup>
ABS-CF10	○	● <sup>6</sup>	● <sup>6</sup>	● <sup>6</sup>	○
Antero™ 800NA	○	○	● <sup>4</sup>	○	○
Antero 840CN03	○	○	● <sup>4</sup>	○	○
ASA	● <sup>5</sup>	●	●	●	●
FDM® Nylon 6	○	● <sup>5</sup>	● <sup>5</sup>	○	○
FDM® Nylon 12	○	●	●	●	○
FDM® Nylon 12CF	○	○	● <sup>4</sup>	○	○
PC	○	●	●	●	● <sup>3</sup>
PC-ABS	○	●	●	●	● <sup>2</sup>
PC-ISO™	○	●	●	●	○
PLA	○	○	● <sup>6</sup>	○	○
PPSF	○	○	● <sup>5</sup>	○	○
TPU 92A™	○	○	● <sup>6</sup>	○	○
ULTEM™ 9085 resin	○	● <sup>3</sup>	● <sup>3</sup>	○	○
ULTEM™ 1010 resin	● <sup>5</sup>	● <sup>3</sup>	● <sup>3</sup>	○	○
ST-130	○	● <sup>3</sup>	○	○	○

<sup>1</sup> F900 and F370 only  
<sup>2</sup> F370 and Fortus 450mc only  
<sup>3</sup> Fortus 450mc only  
<sup>4</sup> Fortus 450mc and F900 only  
<sup>5</sup> F900 only  
<sup>6</sup> F370 only

# Ready to transform your manufacturing?

Learn more about FDM 3D printers at  
[Stratasys.com](https://stratasys.com).



## Get in touch

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