

Fortus 450mc



Industrial FDM technology with an open material ecosystem for advanced prototyping, tool production and end-use parts.

Bring the speed, agility and design freedom of advanced additive manufacturing to your business while gaining the latest advances in FDM® technology. The Fortus 450mc™ 3D printer builds high-requirement functional prototypes, rugged manufacturing tooling and custom production parts in its large 406 x 355 x 406 mm (16 x 14 x 16 in.) build envelope. Fourteen Stratasys Preferred Materials¹, multiple Stratasys Validated Materials² and soluble support address a wide variety of applications.

OpenAM™ software lets users alter print parameters to optimize material capabilities and print results. GrabCAD Print™, GrabCAD Print Pro™, and Insight™ software provide an easy CAD-to-print workflow and in-depth print processing control. MTConnect and Stratasys Software Development Kits let you integrate the Fortus 450mc into your connected factory floor. Data security, including U.S. Department of Defense STIG compliance, is provided by Stratasys ProtectAM™ technology.

System Specifications

| | |
|----------------------|----------------------------------------------------------------------------------|
| Build Envelope (XYZ) | 406 x 355 x 406 mm (16 x 14 x 16 in.) |
| Material Delivery | Two bays each for model and support canisters. Auto changeover between canisters |

Product Specifications

Stratasys Preferred Materials

| Material | Layer Thickness | | | | Support Structure | Available Colors | |
|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------|--------------------------------------------------------------|---------------------------------------------------------|
| | 0.127 mm (0.005 in.) | 0.178 mm (0.007 in.) | 0.254 mm (0.010 in.) | 0.330 mm (0.013 in.) | | | |
| ABS-ESD7™ | ○ | ● | ● | ○ | Soluble | ■ Black | |
| ABS-M30™ | ● | ● | ● | ● | Soluble | ■ Ivory ■ Black ■ Blue | □ White ■ Red ■ Dark Gray |
| ABS-M30i™ | ● | ● | ● | ● | Soluble | ■ Ivory | |
| Antero™ 800NA | ○ | ○ | ● | ○ | Breakaway | ■ Natural | |
| Antero 840CN03 | ○ | ○ | ● | ○ | Breakaway | ■ Natural | |
| ASA | ● | ● | ● | ● | Soluble | ■ Black ■ Dark Gray ■ Light Gray □ White ■ Ivory | ■ Dark Blue ■ Green ■ Yellow ■ Orange ■ Red |
| FDM Nylon 12™ | ○ | ● | ● | ● | Soluble | ■ Black | |
| FDM Nylon 12CF™ | ○ | ○ | ● | ○ | Soluble | ■ Black | |
| PC | ● | ● | ● | ● | Breakaway, Soluble | □ White | |
| PC-ABS | ● | ● | ● | ● | Soluble | ■ Black | |
| PC-ISO™ | ○ | ● | ● | ● | Breakaway | ■ Translucent Natural □ White | |
| ULTEM™ 9085 resin | ○ | ○ | ● | ● | Breakaway | ■ Tan ■ Black | |
| ULTEM™ 1010 resin | ○ | ○ | ● | ● | Breakaway | ■ Natural | |
| ST-130 | ○ | ○ | ○ | ● | Breakaway | ■ Tan | |

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Material Options

Stratasys Validated Materials

| Material | Layer Thickness | | | | Support Structure | Available Colors | |
|--------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------|--------------------------------------|---------------------------------------------------|
| | 0.127 mm (0.005 in.) | 0.178 mm (0.007 in.) | 0.254 mm (0.010 in.) | 0.330 mm (0.013 in.) | | | |
| FDM HIPS | ○ | ○ | ● | ○ | Breakaway | ■ Light Gray | |
| Kimya PC-FR | ○ | ○ | ● | ○ | Soluble | ■ Light Gray | |
| ULTEM® 9085 Resin (colored) | ○ | ○ | ● | ○ | Breakaway | ■ Red ■ JanaWhite ■ Dream Gray | □ White 7362 ■ Gunship Gray ■ Aircraft Gray |
| PC | ○ | ○ | ● | ○ | Soluble | ■ Red | ■ Black |
| PC-ABS | ○ | ○ | ● | ○ | Soluble | ■ Red | |
| VICTREX AM™ 200 | ○ | ● | ○ | ○ | Breakaway, Soluble | ■ Natural | |

Other Specifications

| | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Size and Weight | 129.5 cm x 90.2 cm x 198.4 cm (51 x 35.5 x 78.1 in.) 601 kg (1325 lbs.) |
| Achievable Accuracy | Parts are produced within an accuracy of $\pm .127$ mm ($\pm .005$ in.) or $\pm .0015$ mm/mm ($\pm .0015$ in/in), whichever is greater). Z part accuracy includes an additional tolerance of -0.000/+slice height. Note: Accuracy is geometry dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield. |
| Network Communication | 10/100 base T connection. Ethernet protocol. Wired: TCP/IPV6 protocols |
| Operator Attendance | Limited attendance for job start and stop required. |
| Power Requirements | 208VAC 3 phase, 50/60 Hz, consumes 18 Amps |
| Regulatory Compliance | CE, cTUVus, RCM, EAC, FCC Part B |
| Software | All Fortus systems include Insight™ and Control Center™ job processing and management software. Compatible with GrabCAD Print™ and GrabCAD Print Pro™ for use with part processing, job reports, scheduling and remote monitoring. OpenAM software is available through the purchase of an OpenAM License |
| Operating System | Microsoft Windows 11 (Pro, Enterprise, Education), Microsoft Windows 10 (Pro, Enterprise, Education), Microsoft Windows Server 2012 R2. Insight software requires a 64-bit operating system. |

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ISO 9001:2015 Certified

Product Spec Sheet

FDM

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