PRODUCT SPEC SHEET
FDM

F870

Large-part manufacturing in a production-ready platform.

The Stratasys® F870™ delivers reliable large-part production for jigs, fixtures, prototypes, and manufacturing tooling. With a 1,000 x 610 x 610 mm (39.4 x 24 x 24 in.) build envelope, integrated material drying, automatic material changeover, and a fully heated build chamber, the F870 is designed to produce large, strong, and accurate parts on the manufacturing floor.

Built for extended, unattended operation, the F870 supports up to two weeks of continuous printing and delivers higher throughput with the optional N25 high-speed print head with ASA. GrabCAD Print™ software and MTConnect-enabled connectivity help streamline production workflows from CAD to finished part. GrabCAD Print Pro is a paid upgrade to GrabCAD Print and provides additional workflow and productivity enhancements.



System Specifications

Build Envelope (XYZ)	1,000 x 610 x 610 mm (39.4 x 24 x 24 in.) Maximum diagonal build length: 1,171 mm (46.1 in.)
Material Delivery	Four 4,100 cm^3 (250 in^3) material spools with automatic material changeover. Shared consumable platform with Stratasys F3300®.
Material Drying	Integrated regenerative drying system for up to 4 spools.

Stratasys Preferred Materials

Material	Layer Thickness			Support Structure	Available Colors
	0.18 mm (0.007 in.)	0.25 mm (0.010 in.)	0.33 mm (0.013 in.)		
FDM Nylon 12CF	○	●	○	SR-35™ (soluble)	■ Black
ABS-M30™	●	●	●	SR-35™ (soluble)	■ Black
FDM® ASA	●	●	●[1]	SR-35™ (soluble)	□ White ■ Black ■ Light Gray ■ Natural ■ Red ■ Yellow

[1] The N25 head is only compatible with 0.330 mm (0.013 in.) layer height.

Stratasys Validated Materials

Material	Layer Thickness			Support Structure	Available Colors
	0.18 mm (0.007 in.)	0.25 mm (0.010 in.)	0.33 mm (0.013 in.)		
FDM® ABS Draft	○	●	○	SR-35™ (soluble)	■ Gray

Other Specifications

System Size and Weight	175 x 124 x 196 cm (69 x 49 x 77 in.) 817 kg (1,800 lbs.)
Dimensional Accuracy	**XY part accuracy:** ± 0.254 mm or ± 0.002 mm/mm (± 0.010 in. or ± 0.002 in./in.), whichever is greater. **Z part accuracy:** ± 0.200 mm or ± 0.002 mm/mm (± 0.008 in. or ± 0.002 in./in.), whichever is greater, plus one layer height. Accuracy is geometry and material dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield.
Software	GrabCAD Print, GrabCAD Print Pro[1], Insight™, Control Center™, MTConnect-enabled
Workstation Compatibility	Wired and wireless (with USB dongle) network interfaces using standard TCP/IP protocols at 100 MBPS minimum.
Wireless Network Connectivity	IEEE 802.11n-2009 IEEE 802.11g-2003 IEEE 802.11b-1999
Operating Conditions	**Operating temperature:** 15 °C to 30 °C (59 °F to 86 °F) **Operating humidity:** 30 -60% non-condensing *Recommend 40% or less RH for optimal Nylon 12CF performance
Noise Emission (Acoustic)	<65 dBA when idle and in operation
Regulatory Compliance	CE, cTUVus, RCM, EAC, FCC Part B
Electrical Requirements	Three-phase, 208V, 30A, five-wire, 47-63Hz frequency
Air Requirements	No shop air required. Integrated vacuum pump.
Facility Requirements	Double-door width required for installation. **Minimum Clearance:** 15 cm (6 in.) on the back and left sides, 91 cm (36 in.) on the right side, 152 cm (60 in.) on the front, and 51 cm (20 in.) overhead of the printer. **Service Clearance:** 91 cm (36 in.) on the back and sides, 152 cm (60 in.) on the front, and 51 cm (20 in.) overhead of the printer.
Installation Requirements	Forklift required for uncrating and installation. **Crate dimensions:** 186.7 x 146 x 225.4 cm (73.5 x 57.5 x 88.75 in.) **Crated weight:** 1,065 kg (2,350 lbs.)

[1] GrabCAD Print Pro is available on a subscription basis.

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