F190CR Composite Printer

The F190™CR is a composite-ready 3D printer capable of printing engineering thermoplastics and composite carbon-filled materials. Hardened components and dedicated print heads provide the durability for extended life necessary when printing with carbon-filled plastics. The combination of composite and standard polymers offers the versatility to cover many manufacturing applications with one printer. Hands-free soluble support material enables printing complex geometries and hands-free post-processing.

The F190CR printer has multiple features designed for ease of use and high uptime.

- GrabCAD Print™ and Insight™ software provide a simple workflow and in-depth print process control
- Fully heated build chamber enables consistent print results with multiple infills from sparse to fully dense
- Material bays located in pullout drawers allow for easy accessibility and fast changes
- Built-in camera provides visual remote print monitoring
- Power is supplied by standard wall outlets
- Printers are mounted on casters for easy mobility

The F190CR, under new part number 123-70010, is GREENGUARD Certified per UL 2904 when using ABS, ASA, and Nylon-CF10 with SUP4000B and QSR Support™ materials. GREENGUARD Certification validates that the printer and material combination meet low chemical emission limits.

F190CR Printer and Material Specifications

System Size/Weight	1,626 x 864 x 711 mm (64 x 34 x 28 in.) 227 kg (500 lbs)
Build Tray Dimensions	305 mm x 254 mm x 305 mm (12 x 10 x 12 in.)
Material Delivery	2 material spool bays, 1 for model, 1 for support located in a drawer on the front of the unit
Achievable Accuracy[1]	Parts are produced within an accuracy of +/- .200 mm (.008 in.), or +/- .002 mm/mm (.002 in./in.), whichever is greater
Network Connectivity	Wired: TCP/IPv6 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
Operator Attendance	Limited attendance for job start and stop required
Software	GrabCAD Print, GrabCAD Print Pro[2], MTConnect enabled
Operating Environment	**Operating:** Temperature: 15 – 30 ºC (59 – 86 ºF), Humidity: 30 – 70% RH **Storage:** Temperature: 0 – 35 ºC (32 – 95 ºF), Humidity: 20 – 90% RH
Power Requirements	100 – 132V/15A or 200 – 240V/7A. 50/60 Hz
Regulatory Compliance	CE (low-voltage and EMC directive), FCC, EAC, cTUVus, FCC, KC, RoHs, WEEE, Reach, RCM
Operating System	Windows 10 and 11 (64 bit only) with a minimum of 8GB RAM (16GB or more recommended)
Certifications[3]	GREENGUARD Certified per UL 2904 when using ABS, ASA, and Nylon-CF10 with SUP4000B and QSR Support™ materials

[1] Accuracy is geometry-dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield. Z part accuracy includes an additional tolerance of -0.000/+layer height.

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

[3] GREENGUARD Certification is available on new F190CR systems under part number 123-70010.

Material Options

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.)			
PLA	○	○	●	○	Breakaway	■ Black □ White ■ Light Gray ■ Medium Gray ■ Red ■ Blue	■ Yellow ■ Natural ■ Translucent ■ Red Translucent ■ Blue Translucent ■ Green Translucent
ABS-M30™	●	●	●	●	Soluble	■ Ivory ■ Black □ White ■ Dark Gray ■ Blue	■ Red ■ Green ■ Yellow ■ Orange
ASA	●	●	●	●	Soluble	■ Ivory ■ Black □ White ■ Dark Gray ■ Light Gray	■ Dark Blue ■ Green ■ Yellow ■ Orange ■ Red
FDM TPU 92A	○	●	●	○	Soluble	■ Black	
ABS-CF10	●[1]	●	●	●	Soluble	■ Black	
Nylon-CF10[2]	○	●	●	●	Breakaway, Soluble	■ Dark Gray	

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 TPU 92A	○	○	●	○	Soluble	■ Red

[1] F123 T14H Head (123-00603-S) is the only approved head for 0.127 mm (0.005 in.) with ABS-CF10.
[2] Dedicated FDM Nylon-CF10 hardened print head is required

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