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

F190CR Printer and Material Specifications				
System Size/Weight	1626 x 864 x 711 mm (64 x 34 x 28 in.) 500 lbs (227 Kg)			
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	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 software, MTConnect enabled			
Operating Environment	Operating: Temperature: $15 - 30$ °C ($59 - 86$ °F), Humidity: $30 - 70\%$ RH Storage: Temperature: $0 - 35$ °C ($32 - 95$ °F), 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 (64 bit only) and Window 11 with a minimum of 4GB RAM (8GB or more recommended)			

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Material	
Printer	Model Material
F190CR	ABS-M30, ASA, FDM® TPU 92A, ABS-CF10, FDM Nylon-CF10

Layer Thickness	;			
Material	0.013 in. (0.330 mm)	0.010 in. (0.254 mm)	0.007 in. (0.178 mm)	0.005 in. (0.127 mm) ³
ABS-M30	•	•	•	•
ASA	•	•	•	•
FDM TPU 92A	0	•	•	0
ABS-CF10 ¹	•	•	•	•
FDM Nylon-CF10 ²	•	•	•	0

¹ Hardened print head is recommended for extended head life but will also operate using standard F123 and ABS-CF10 print heads.

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 $^{^{\}rm 2}$ Dedicated FDM Nylon-CF10 hardened print head required.

 $^{^{\}rm 3}$ F123 T14H Head (123-00603-S) is the only approved head for 0.005in (0.127mm) with ABS-CF10."