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 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 (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	○	●	●	○
ABS-CF10[1]	●	●	●	●
FDM Nylon-CF10[2]	●	●	●	○

[1] Hardened print head is recommended for extended head life but will also operate using standard F123 and ABS-CF10 print heads.
[2] Dedicated FDM Nylon-CF10 hardened print head required.
[3] F123 T14H Head (123-00603-S) is the only approved head for 0.005in (0.127mm) with ABS-CF10."

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