

## **F123CR Composite Series**

The F123CR printer series comprises the F190™CR and F370®CR composite printers, equipped with hardened components to operate with composite materials. Both systems are available with ABS-CF10 and FDM® Nylon-CF10 carbon fiber-reinforced composite materials. These materials operate with dedicated print heads for extended life. In addition, up to six engineering-grade thermoplastics are available for broader application versatility. Hands-free soluble support material enables printing highly complex parts and hands-free post-processing.

F123CR composite series printers have 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
- Auto changeover capability on the F370CR extends print times
- Built-in camera provides visual remote print monitoring
- Power is supplied by standard wall outlets
- · Printers are mounted on casters for easy mobility

F190CR and F370CR Printe	r 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	<b>F190CR:</b> 305 mm x 254 mm x 305 mm (12 x 10 x 12 in.)		
	<b>F370CR:</b> 355 mm x 254 mm x 355 mm (14 x 10 x 14 in.)		
Material Delivery	<b>F190CR:</b> 2 material spool bays, 1 for model, 1 for support located in a drawer on the front of the unit		
	<b>F370CR:</b> 4 material spool bays, 2 for model, 2 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/IP 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		
	F190CR: GrabCAD Print software, MTConnect enabled		
Software	F370CR: GrabCAD Print and Insight 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, RCN		
Operating System	Windows 10 (64 bit only) and Window 11 with a minimum of 4GB RAM (8GB or more recommended)		



## F123CR Composite Series

Materials	
Printer	Model Material
F190CR	ABS-M30, ASA, FDM * TPU 92A, ABS-CF10, FDM Nylon-CF10
F370CR	ABS-M30, ASA, FDM TPU 92A, ABS-ESD7™, PC-ABS™, Diran™ 410MF07, 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)
ABS-M30	•	•	•	•
ASA	•	•	•	•
PC-ABS	•	•	•	•
ABS-ESD7		•		
Diran 410MF07	•	•	•	
FDM TPU 92A		•	•	
ABS-CF10 <sup>1</sup>	•	•	•	
FDM Nylon-CF10 <sup>2</sup>	•	•	•	

<sup>&</sup>lt;sup>1</sup> Hardened print head is recommended for extended head life but will also operate using standard F123 and ABS-CF10 print heads.

## THINGLAB

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ISO 9001:2015 Certified



<sup>&</sup>lt;sup>2</sup> Dedicated FDM Nylon-CF10 hardened print head required.