



RAISE3D E2CF



Carbon Fiber
3D Printing
Made Simple

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RAISE3D E2CF



Nozzle with High Durability



Double-gear Extrusion System



Compatible with a Variety of
Carbon Fiber Composite
Filaments



Exclusive Raise3D Industrial
PA12 CF Support Filament



Raise3D Filament Dry Box



Exclusive ideaMaker Slicing
Profiles



E2CF is a desktop 3D printer developed by Raise3D for carbon fiber-reinforced filaments and other composite materials.

Carbon fiber filament has low density, high strength, and it is resistant to corrosion, static electricity and high temperature. It has a wide potential for application in industries that need considerable strength-to-weight ratio in their solutions, such as the aviation industry and the automotive field.

E2CF prints accurately, which is user-friendly, stable, and durable in operation. It is a one-stop desktop-level manufacturing tool suitable for various scenarios.





Nozzle with High Durability

The silicon carbide nozzle has excellent thermal conductivity and resistance to wear, which will effectively lessen the abrasion the carbon fiber composite filament subjects the nozzle to when printing, making the nozzle more durable.

*Nozzles made of other materials suitable for printing carbon fiber filaments will be launched in the future.

Double-gear Extrusion System

- The gears are made of high-hardness steel and have been heat-treated for higher resistance to wear.
- The gear tooth profile is customized, and the double gears engage tightly when operating so there is no filament slipping when extruding.
- The force of the double-gear is doubled to ensure the stability of printing.



Compatible with a Variety of Carbon Fiber Composite Filaments

The E2CF is compatible with the Raise3D Industrial PA12 CF Filament, and is also very compatible with high-performance carbon fiber filaments certified by the Raise3D OFP program, such as PA / PPS / PETG and some other high-performance carbon fiber composite filaments from BASF and LEHVOSS.

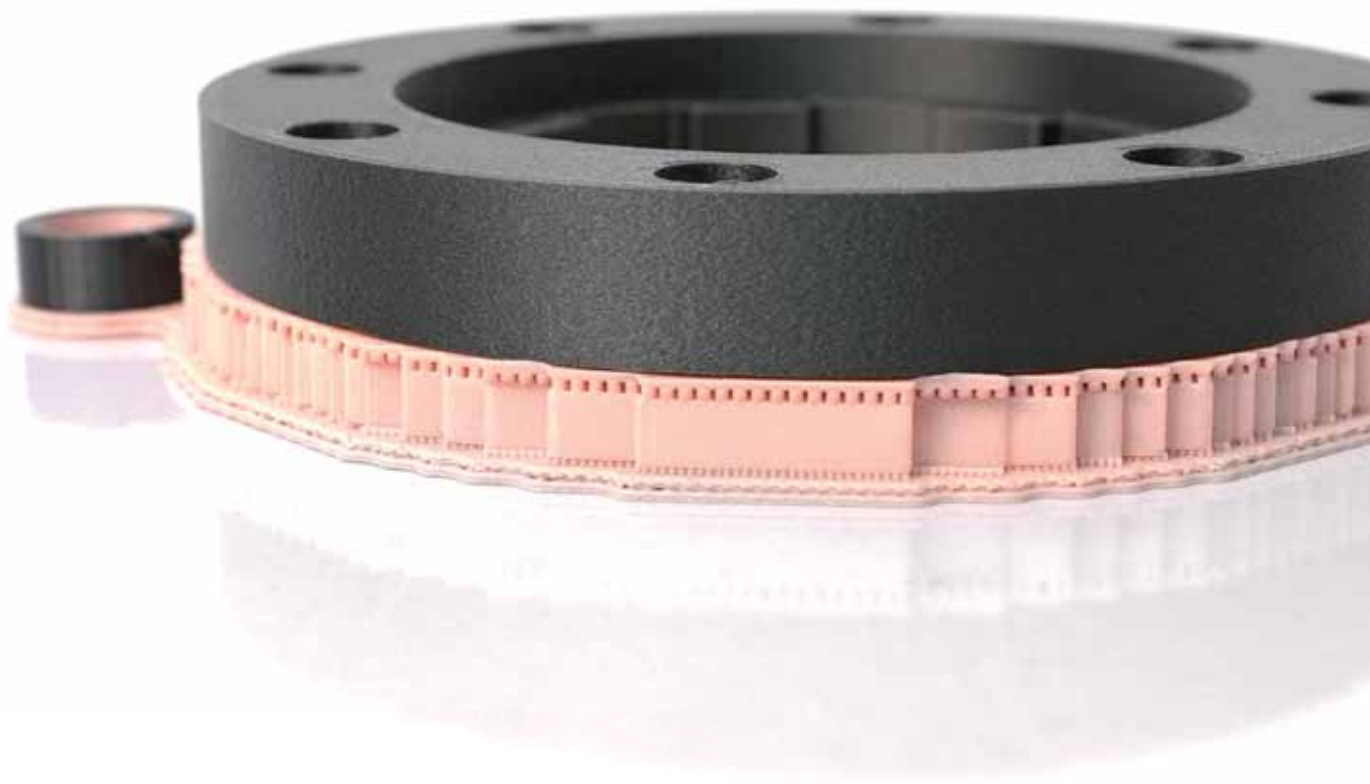


High-Performance Carbon Fiber Filaments Certified by the Raise3D OFP Program



Raise3D Industrial PA12 CF Filament

- Exhibits excellent rigidity and strength, heat resistance, low warpage, and low water absorption, with an outstanding strength-to-weight ratio.
- Enhanced mechanical property and dimensional stability after annealing.
- Suitable to replace metal in the manufacturing of certain lightweight components.



Raise3D Industrial PA12 CF Support Filament

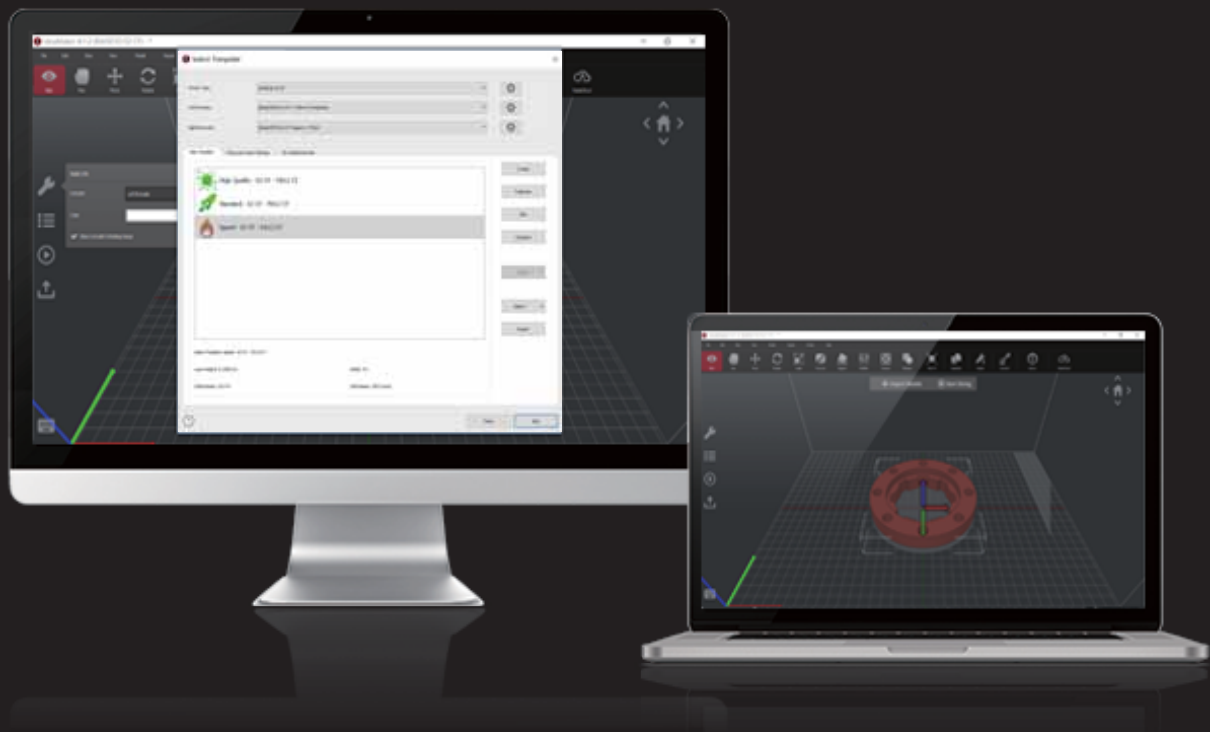
- Creates a stable support structure, provides proper adhesion to printed surfaces and counteracts any tendency to warp.
- Can be easily removed or broken away from the printed parts.
- Significantly improves the surface quality of the overhangs and hollows of the printed items.
- Exhibits a broad compatibility with many Raise3D OFP (Open Filament Program) certified high-performance carbon fiber-reinforced composite filaments.
- More cost-effective compared with water-soluble support material.

Raise3D Filament Dry Box

The built-in detached double-disc suspension tray is used to place the filament to allow material to be pulled more smoothly. When closed, it can effectively prevent dust and moisture for up to 30 days*.

*From Raise3D test data.





Exclusive ideaMaker Slicing Profiles

The E2CF has exclusive slicing profiles that have been repeatedly tested and verified by our engineers in ideaMaker. There is no need to adjust the parameters before printing. Enjoy easy and high-quality printing.

Like other Raise3D products, E2CF can carry out mass production and intelligent management with the ideaMaker as the core software solution.

More Features

- Mirror Mode
- Duplication Mode
- Auto Bed Leveling
- Industry First Video-Assisted Offset Calibration System
- Safety Features
- Power Saving Button
- Flexible Build Plate



Printer	E2CF	
Build Volume (W×D×H)	Single Extruder Print	Dual Extruder Print
	330×240×240 mm	295×240×240 mm
Machine Size (W×D×H)	607×596×465 mm	
Electrical	Power Supply Input	100-240 V AC, 50/60Hz 230 V @ 2A
	Power Supply Output	24 V DC, 350 W
General	Print Technology FFF Print Head System IDEX Independent Dual Extruders Filament Diameter 1.75 mm XYZ Step Size 0.78125, 0.78125, 0.078125 micron Print Head Travel Speed 30-150 mm/s Build Plate Flexible Steel Plate with BuildTak Max Build Plate Temperature 110 °C Heated Bed Material Silicone Build Plate Leveling Mesh-leveling with Flatness Detection Filament Run-out Sensor Available Supported Materials PA12 CF, PA12 CF Support, OFP Certified Third-Party Filaments Layer Height 0.1 - 0.25mm Nozzle Diameter 0.4 mm (Default), 0.6/ 0.8 mm (Available) Hot End V4P Max Nozzle Temperature 300 °C Connectivity Wi-Fi, LAN, USB port, Live camera Noise Emission (Acoustic) < 50 dB (A) when building Operating Ambient Temperature 15-30 °C, 10-90% RH non-condensing Storage Temperature -25 to 55°C, 10-90% RH non-condensing Filter HEPA filter with activated charcoal	
Software	Slicing Software ideaMaker Supported File Types STL/ OBJ/ 3MF/ OLTP Supported OS Windows/ macOS/ Linux Machine Code Type GCODE	
Printer Controller	User Interface 7-inch Touch Screen Network Wi-Fi, Ethernet Power Loss Recovery Available Screen Resolution 1024×600 Motion Controller Atmel ARM Cortex-M4 120MHZ FPU Logic Controller NXP ARM Cortex-A9 Quad 1 GHz Memory 1 GB Onboard Flash 8 GB OS Embedded Linux Ports USB 2.0×2, Ethernet×1	



Applications

Carbon fiber composite materials have many applications, including in functional prototypes, aerospace, automotive, medical, sports equipment, civil engineering, electronics, and other fields. Carbon fiber composite material has the potential for a variety of uses such as fixtures in a mechanical workshop, prosthetics, and customized bicycle frames.



Medical

High strength, lightweight, heat-resistant



Automotive

Abrasion-resistant, lightweight, rust-proof



Industrial

Strong, drop-resistant, with special carbon fiber texture



Aerospace

Abrasion-resistant, corrosion-resistant, static-resistant

About Raise3D

Raise3D has become a global leader in manufacturing precise and reliable 3D printers, with h

Raise3D printers have enjoyed an award winning legacy including: "3D Printer of the Year" awa
largest global 3D printing evaluation organization, awarded Raise3D "Best 3D Printer" and "Be

In addition to designing and manufacturing 3D printers used by many of the world's biggest
cloud-based print management platform (RaiseCloud), and professional consulting services ar



headquarters in the U.S.A., China, and the Netherlands.

ward from international tech authority Make magazine (along with the annual cover). All3DP, the
est Large Format 3D Printer".

t companies, Raise3D also develops powerful slicing software (ideaMaker), an enterprise level
nd technologies that result in a one-stop flexible manufacturing solution for our customers.

