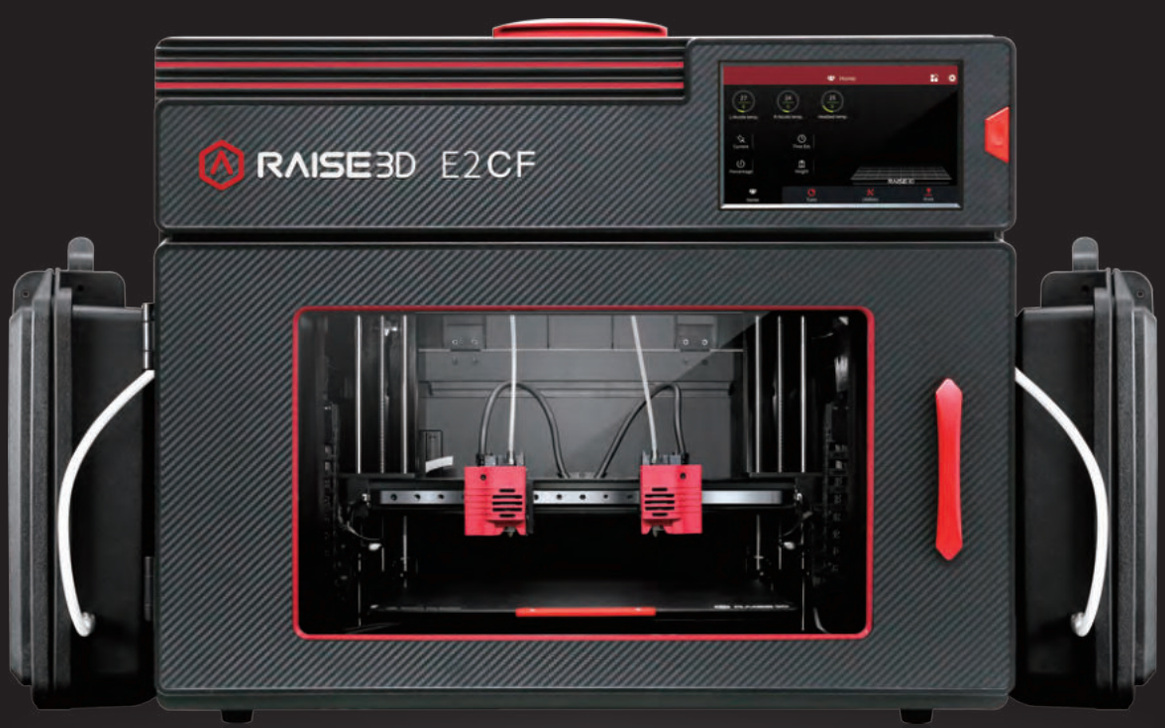
RAISE3D E2CF



Carbon Fiber 3D Printing

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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

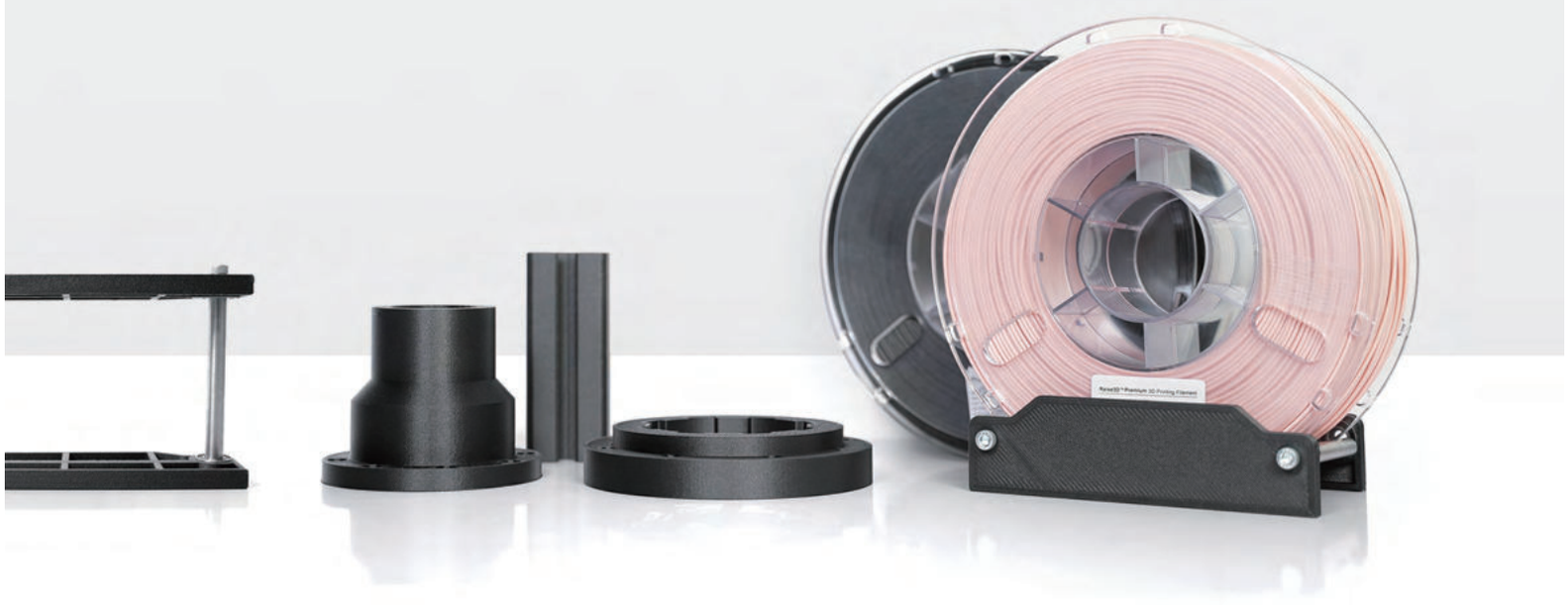
Raise3D Filament Dry Box

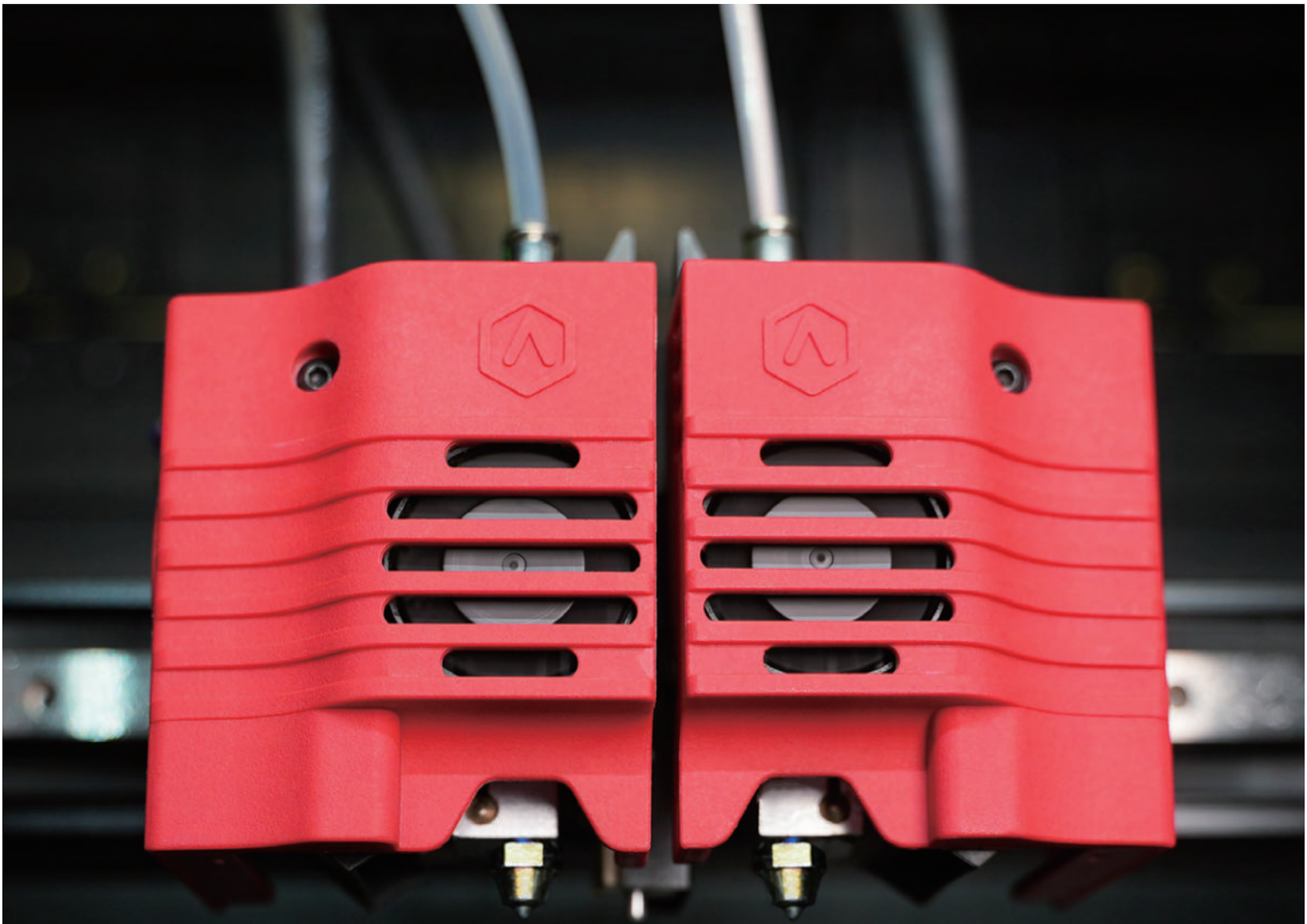
Exclusive ideaMaker Slicing Profiles

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.

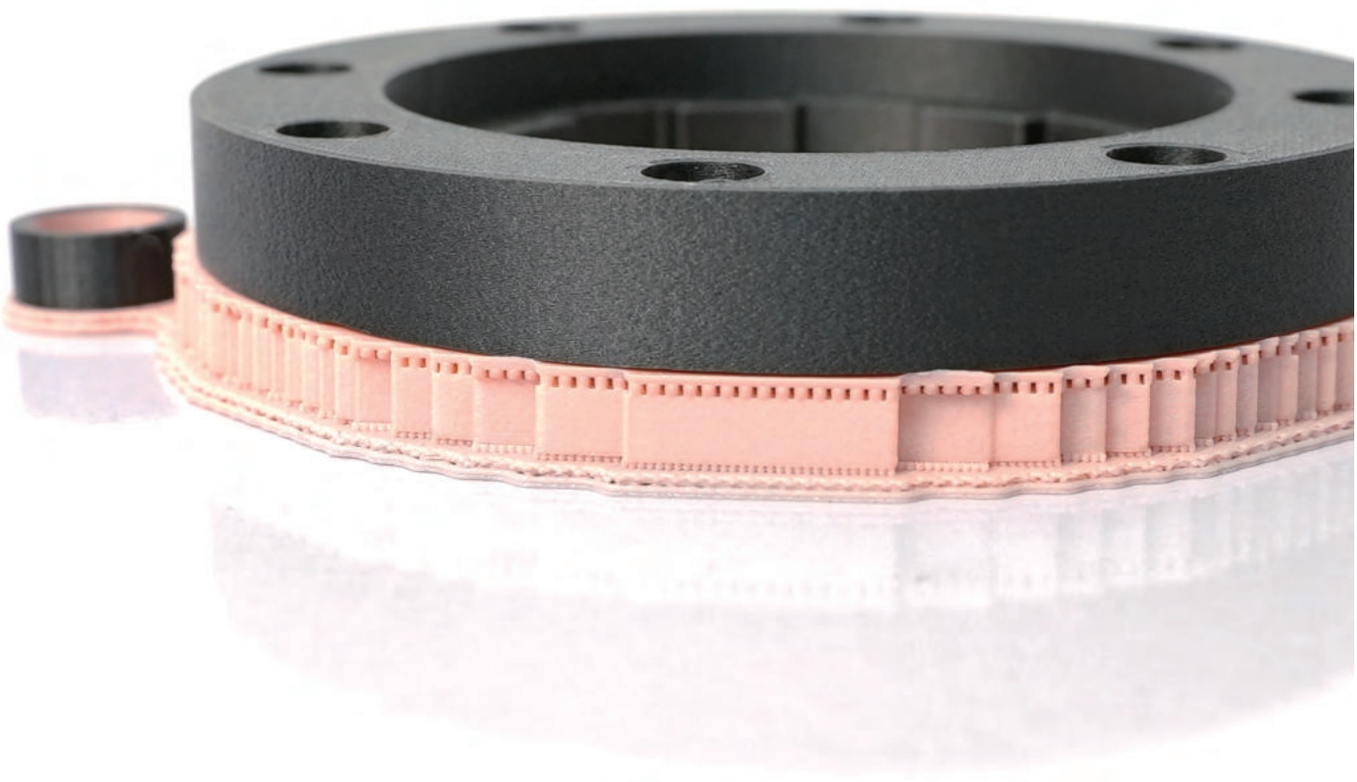
Compatible with a Variety of Carbon Fiber Composite Filaments

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.



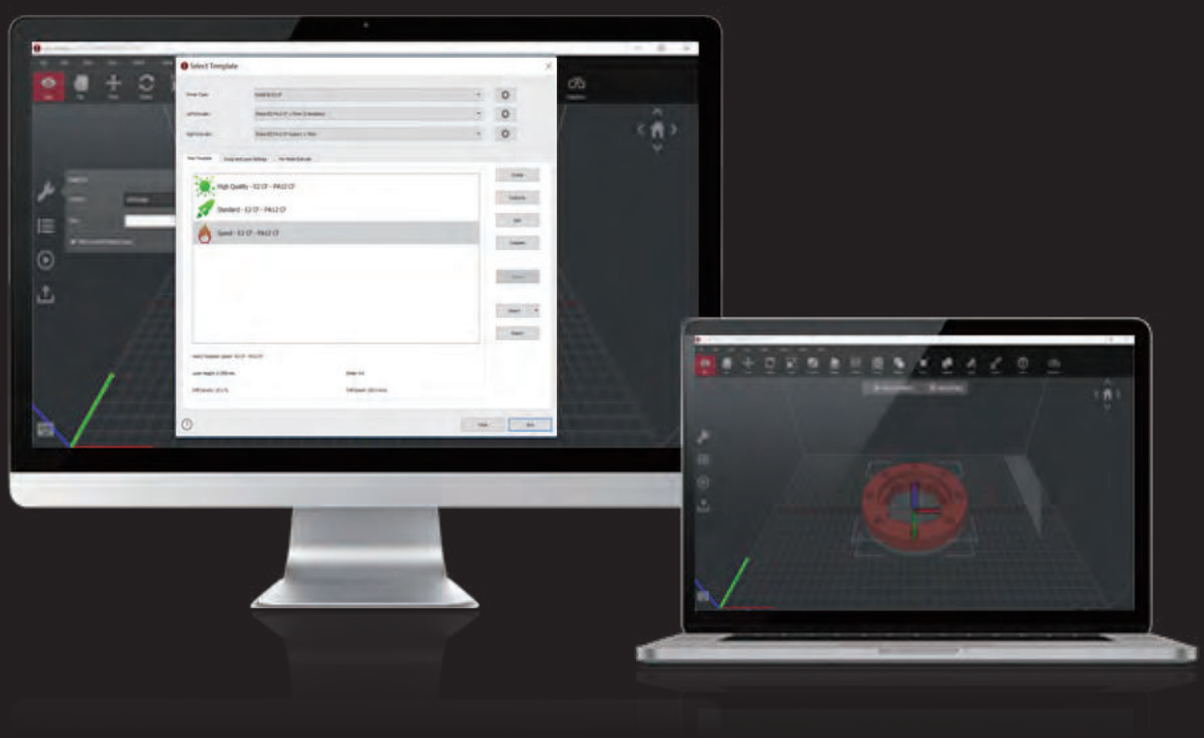
Raise3D Industrial PA12 CF Support Filament

- 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 ℃
	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 ℃
	Connectivity	Wi-Fi, LAN, USB port, Live camera
	Noise Emission (Acoustic)	< 50 dB (A) when building
	Operating Ambient Temperature	15-30 ℃, 10-90% RH non-condensing
	Storage Temperature	-25 to 55℃, 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 Quard 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

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

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

: 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.