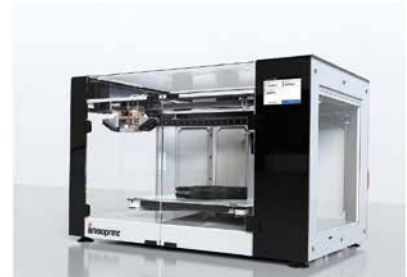
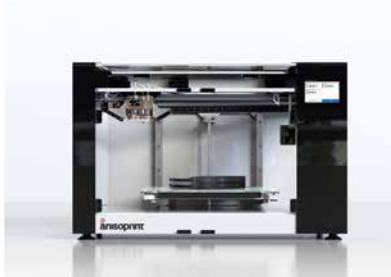


ANISOPRINTING is the technology for manufacturing optimized composite structures through continuous fiber 3d printing



HARDWARE: DESKTOP 3D PRINTER **COMPOSER**

	COMPOSER A4	COMPOSER A3
Printing technology	Composite Fiber Co-extrusion (CFC) Fused Filament Fabrication (FFF)	
Build volume	296mm x 210mm x 140mm	420mm x 297mm x 210mm
Layer thickness, min	60µm	
Print head	Dual nozzle: FFF extruder; CFC extruder with reinforcing filament cutting device	
Nozzle diameter, FFF	0.4 mm	
Print speed, FFF	10 mm/sec — 80 mm/sec	
Print speed, CFC	1 mm/sec — 10 mm/sec	
Plastic filament diameter	1.75mm	
Compatible plastics	Plastics with the processing temperatures up to 270°C: PLA, PETG, PA, PC, ABS, TPU, etc	
Reinforcing material	Anisoprint CCF 1.5k (Composite Carbon Fiber) Anisoprint CBF (Composite Basalt Fiber)	
Interface	SD-card slot, USB-type B	
Slicer	FFF + CFC: Anisoprint Aura FFF: Cura, Slic3r	
OS Support	Windows 7+	
Printer size (LxWxH)	61x40x40 cm	76x64x49 cm
Weight	25 kg	65 kg

Anisoprinting is based on Composite Fiber Co-extrusion technology:

CFC technology



ANISOPRINT COMPOSITE MATERIALS

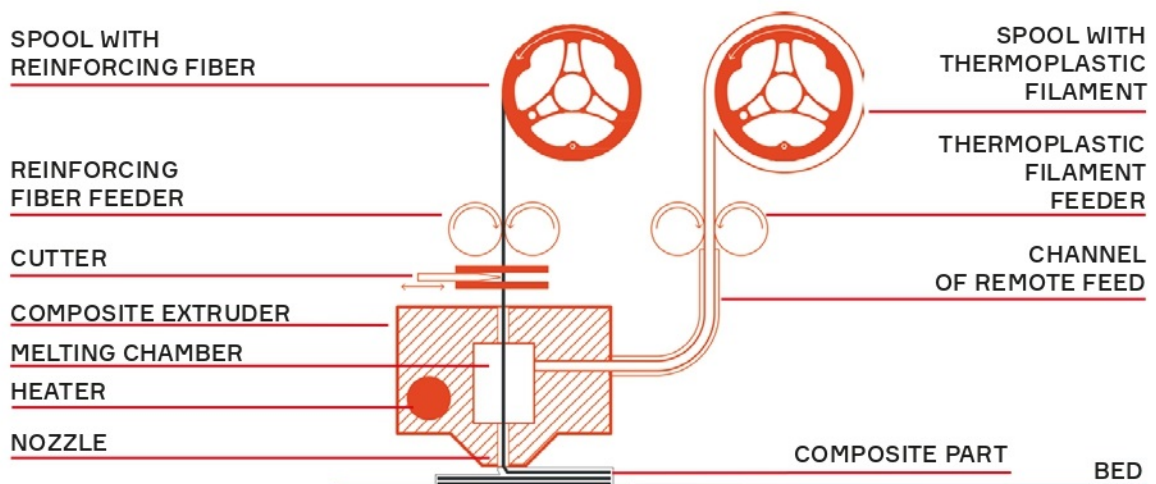
Composite Carbon Fiber (CCF)

Composite Basalt Fiber (CBF)



Reinforcing materials are made by Anisoprint patented technology: continuous fibers (carbon or basalt) are preliminarily impregnated with the special polymer mix. That's why we call them Composite Fibers, because reinforcing material is already composite with continuous fibers itself. Pre-impregnation will give good adhesion of reinforcing material to thermoplastic during the printing process. You get one spool of reinforcing material with the printer.

2 During printing - COMPOSITE FIBER CO-EXTRUSION



During the printing — co-extrusion. Two inputs in composite extruder: one for composite fiber, one — for plastic. Reinforcing fiber and plastic go separately in the same extruder so you can vary fiber volume ratio and lay it by complex curvilinear trajectories. In this way, it's possible to reinforce exactly those zones where the load is planned to apply.

RESULT

DUAL-MATRIX COMPOSITE

Up to **30** times stronger than **plastic**

Up to **7** times lighter than **steel**

Up to **2** times stronger and lighter than **aluminium**

As a result, you get two-matrix composite that is several times stronger and lighter than plastic, metal or non-optimal composites. The technology allows optimizing the inner structure of the part printing it in the form of a composite lattice. Strength and stiffness of the composite lay along the fiber that's why the lattices which consist of one-dimensional ribs are the optimal shape for composites. With the composite infills, you can get maximum characteristics while wasting minimum material that means minimum weight, production time and price of the part.

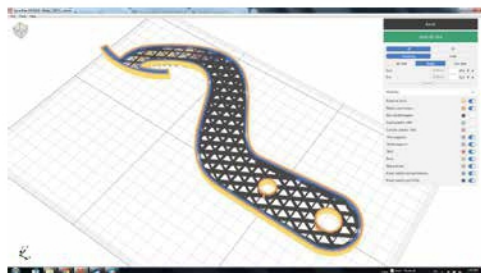
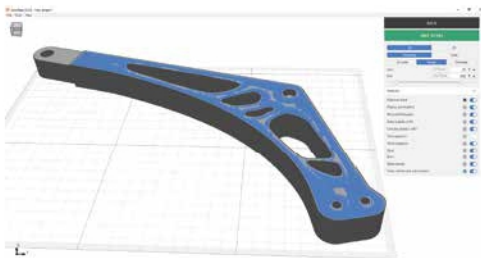
REINFORCING MATERIAL: COMPOSITE CARBON FIBER (CCF) COMPOSITE BASALT FIBER (CBF)



Plastic reinforced with Anisoprint reinforcing materials

Parameter	CCF-1.5K + PETG	CBF + PETG
Density, g/cm ³	1.4	1.7
Tensile modulus in fiber direction, GPa	64	22
Poisson ratio 21	0.36	0.34
Tensile ultimate stress in fiber direction, MPa	860	600
Tensile elongation in fiber direction, %	1.3	2.8
Compressive modulus in fiber direction, GPa	—	20
Compressive ultimate stress in fiber direction, MPa	290	195
Compressive elongation in fiber direction, %	—	1.2
Flexural Strength, MPa	520	—

SLICING SOFTWARE: AURA



- for FFF and CFC printers
- support for STL and CAD formats: .stp, .3ds, .obj
- model saved on a local PC
- G-code generalization, geometry-view
- separate setting and combining of printers, plastics and profiles
- printing different areas with different materials
- available for free



anisoprint

STOP METAL THINKING → START ANISOPRINTING

**CONTINUOUS FIBER 3D PRINTING FOR INDUSTRIAL-GRADE PARTS.
STRONGER, LIGHTER AND CHEAPER THAN METAL
OR NON-OPTIMIZED COMPOSITES.**

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