2015 - 2025
10th Anniversary

RAISE3D E3

Elastic

Engineering-grade

Expandable


RAISE3D E3
RAISE3D

- **Flexible Filament Auxiliary Feeder**
- **Pro Ironing**
- **Wide Filament Compatibility**
- **IDEX**
- **Material Storage Slots with Desiccant**
- **Auto Bed Leveling and Substrate Printing**

The Raise3D E3 IDEX printer delivers precise, stable, and fast prints of up to 200 mm/s for composite materials and TPU, perfect for prototyping and end-use part production. Built for diverse manufacturing needs, the E3 features the Flexible Filament Auxiliary Feeder and composite filament print head, suited for printing TPU, composite materials, and parts with specific surface finishes.

Reshape the boundaries of manufacturing with the E3: Elastic, Engineering-grade, Expandable.

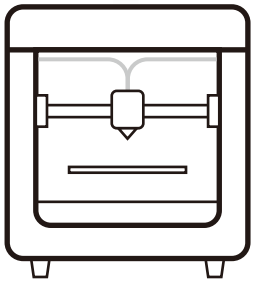
Solving the Existing Issues with Flexible and Composite Filament Printing

Low Printing Speed of Flexible Filaments with Low Success Rate

Limited Flexible Filament Compatibility

Nozzle Wear Caused by Composite Filament Printing

Existing 3D printers with “Dual-feed, single-extruder”system



Faster, More Reliable Printing of Flexible Filaments

Broader Flexible Filament Compatibility

E3 with Flexible Filament Auxiliary Feeder

Higher Nozzle Durability

E3 with Composite Filament Print Head

Raise3D E3

01 Faster, More Reliable Printing of Flexible Filaments, with Broader Compatibility

When equipped with Raise3D's Flexible Filament Auxiliary Feeder, the E3 3D printer achieves high-speed printing of flexible filaments at up to 200 mm/s - with greater success rates and extended compatibility across a wider range of hardness levels, including TPU-95A, TPU-90A, TPU-80A, and more.

Raise3D Flexible Filament Auxiliary Feeder

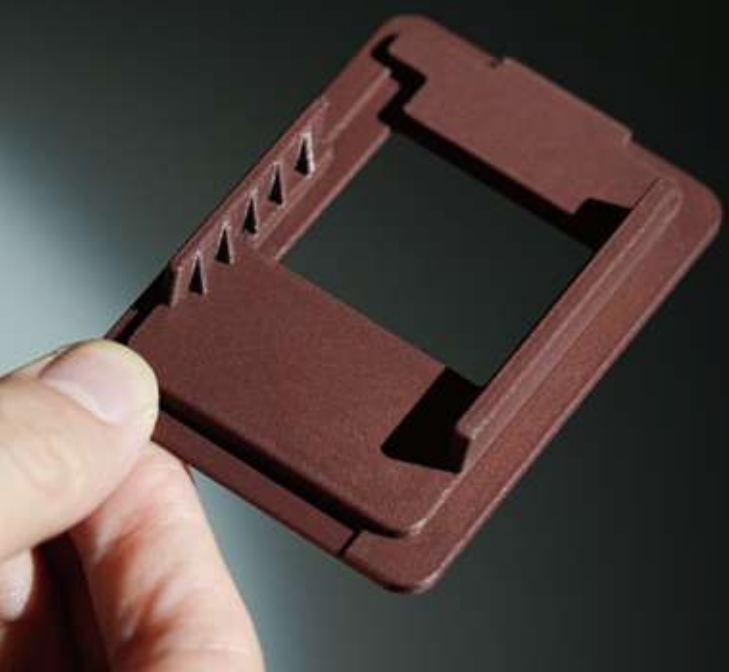
- Increase the feed rate of flexible filaments such as TPU
- Enable the E3 to print TPU at up to 200 mm/s
- Extend flexible filament compatibility

02 Engineered with Performance in Mind for Composite Filaments

With the optional composite filament print head, the E3 supports a variety of composite filaments, including PET CF, PET GF, and PPS CF. It reliably handles complex prints with these filaments, ensuring a smooth and consistent printing process. Combined with E3's Pro Ironing feature and the latest Hyper Speed PLA Pro filament, expect highly precise parts with excellent surface finishes.

Printing Capabilities for Composite Filament

- Support a variety of composite filaments
- Composite filament print head

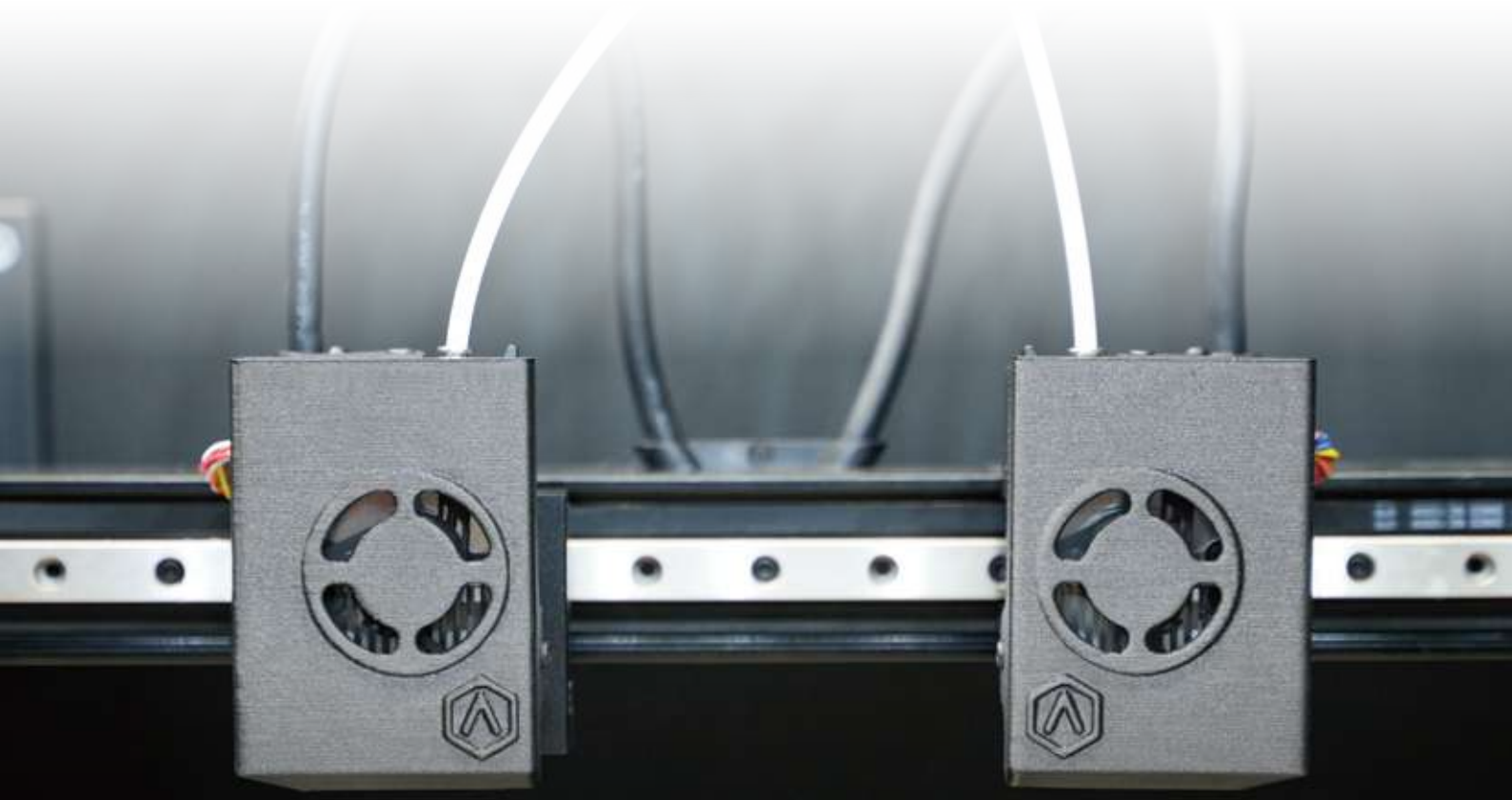


Pro Ironing

- A synergy of the E3, the Hyper Speed PLA Pro or Industrial PETG ESD filaments, and the slicing profile
- Deliver an improved surface quality comparable to injection molding
- Average roughness (Ra) of less than 2 um

03 Efficient and Stable Production

Raise3D's E3 is equipped with dual material storage slots with desiccant, filament run-out sensors, and power loss recovery that provides essential safeguards for uninterrupted, long-duration prints. The exceptional printing precision allows the E3 to meet engineering-grade requirements for both functional prototypes and end-use parts. With print speeds of up to 200 mm/s and IDEX capabilities for duplication mode and mirror mode, the E3 enables rapid batch production that ensures a seamless transition from R&D to full-scale manufacturing.



IDEX

- Support multiple print modes: mirror mode, duplication mode
- Dual-color and dual-material printing
- Double production output by printing identical models simultaneously
- Print two materials with significantly different printing temperatures

Material Storage Slots with Desiccant

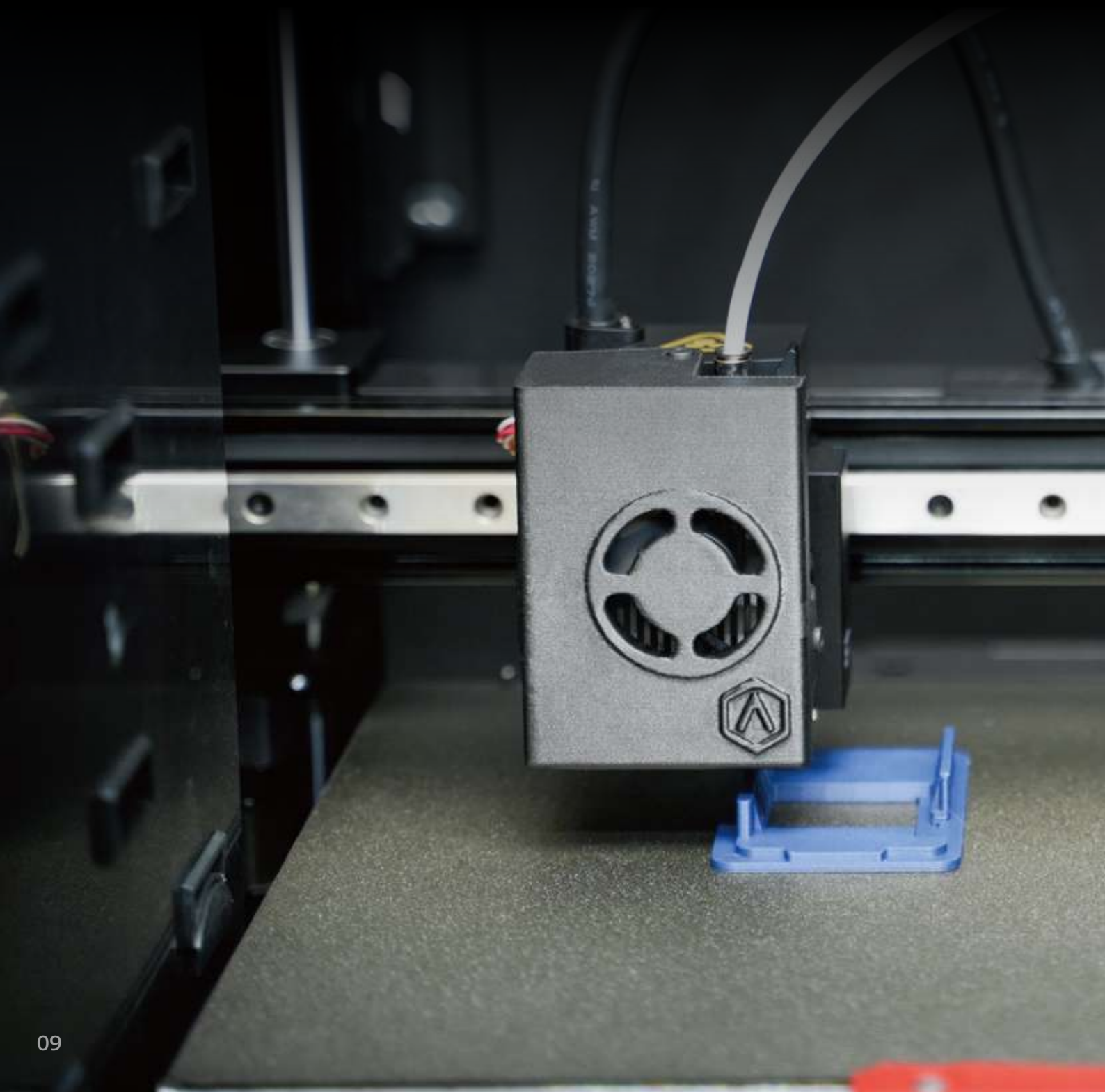
- Two material storage slots with desiccant
- Eliminate moisture-related print defects
- Prevent dimensional distortion caused by continuous high-temperature drying
- Ensure higher dimensional accuracy of printed parts

Power Loss Recovery and Filament Run-out Sensors

- Prevent a print from failing during a power outage
- Alert users when the filament is about to run out during a print

04 Convenient Printing Experience to Boost Creativity

The E3 comes equipped with auto bed leveling that significantly reduces print preparation time while maintaining highly precise prints. With the 9-point leveling, the E3 can support substrate printing that allows users to print on a flat substrate, unlocking new creative possibilities.
The E3 also features filament run-out sensors and power loss recovery, providing enhanced reliability and peace of mind.



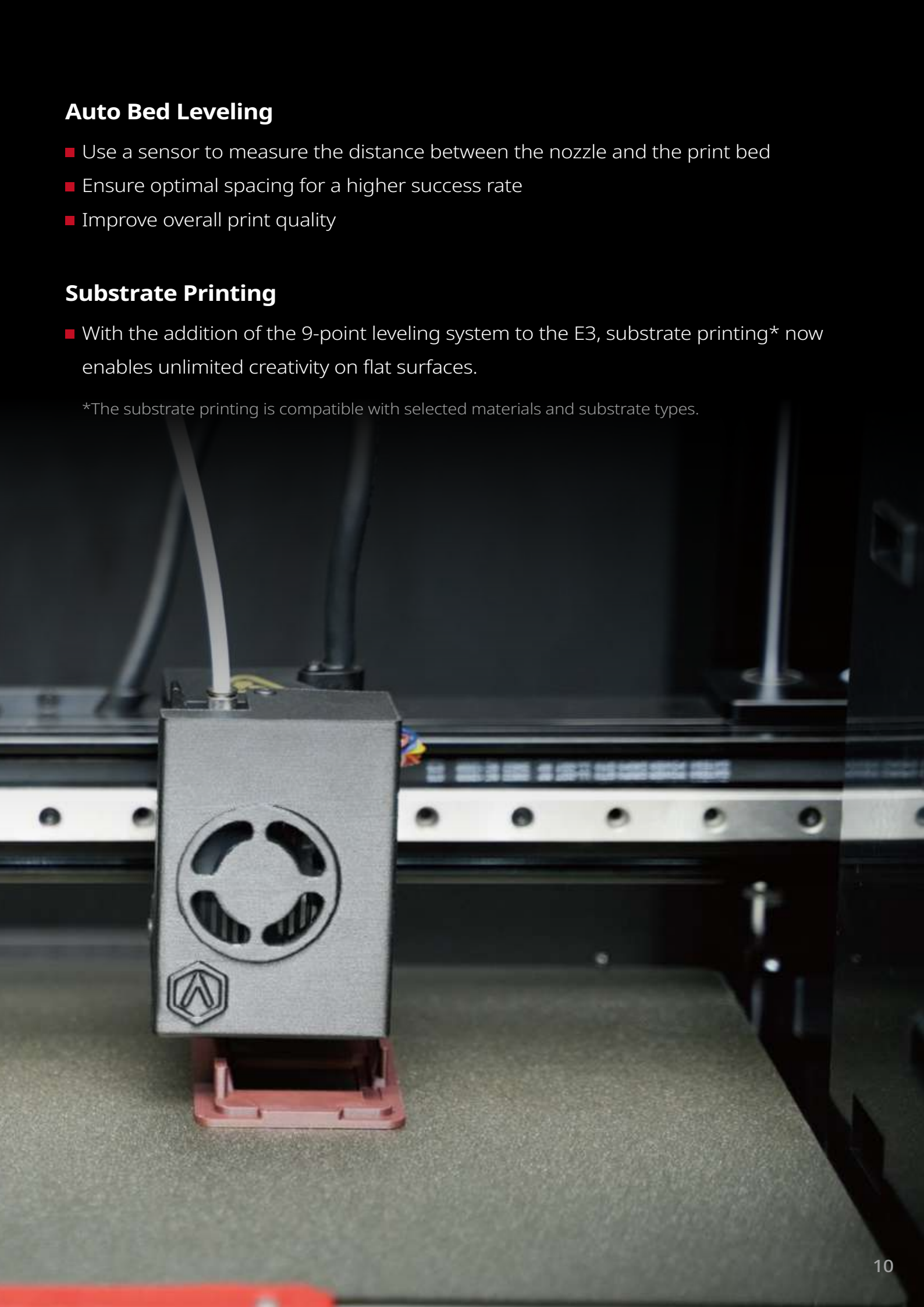
Auto Bed Leveling

- Use a sensor to measure the distance between the nozzle and the print bed
- Ensure optimal spacing for a higher success rate
- Improve overall print quality

Substrate Printing

- With the addition of the 9-point leveling system to the E3, substrate printing* now enables unlimited creativity on flat surfaces.

*The substrate printing is compatible with selected materials and substrate types.



Wide Filament Compatibility

The E3 is compatible with all Raise3D filaments, and is compatible with the OMP (Open Material Program), offering broad material versatility. The E3 comes standard with a 0.4 mm nozzle, and supports 0.2 mm, 0.6 mm, 0.8 mm, and 1.0 mm nozzles, meeting a wide range of material requirements and application needs.

Hyper Core	Hyper Speed	Industrial	Premium
PPA CF	PLA	PPA CF	PLA
PPA GF	ABS	PPA GF	ABS
ABS CF	PETG CF	PET CF	ASA
	PET CF	PET GF	PETG
	PLA Pro	PETG ESD	PC
		PET Support	TPU-95A
		PPA Support	PVA+
		PPS CF	
		PA12 CF+	

Flexible and Elastic Material

When equipped with the Flexible Filament Auxiliary Feeder, the E3 is compatible with TPE (TPU, TPE-A, TPE-S, TPE foam filaments, etc.), Shore (A) hardness between 95A and 80A (e.g. TPU-95A, 90A, 80A), as well as all Shore (D) hardness filaments.

OMP (Open Material Program)

The OMP (Open Material Program) is a collaboration between Raise3D with Filament Manufacturers and Resin Manufacturers to identify and select top performing certified third-party filaments and resins for Raise3D printers.

Integrated Workflow

1

Data Preparation

Filament Selection
Raise3D Filaments and OMP

Raise3D Academy
All-in-one 3D printing knowledge base

ideaMaker Library
User community and slicing profile sharing platform

2

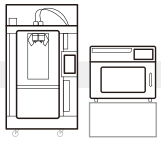
Data Conversion

ideaMaker
Leading slicing software worldwide

3

Printing Management

RaiseCloud
Remote management cloud platform



Raise3D Printers
FFF 3D printers with wide applications

Application Examples

Thin Structure Part

Filament: Hyper Speed PLA Pro (Ironing enabled)

Model Size: 77 × 52 × 12 mm

Model Weight: 11.7 g

Layer Height: 0.2 mm

Print Time: 37 minutes

Car Shock Absorber Cushion

Filament: TPU-95A

Model Size: 65 × 65 × 59 mm

Model Weight: 90.1 g

Layer Height: 0.2 mm

Print Time: 1 hour 27 minutes

Engineering Part

Filament: Industrial PPA GF & Industrial PPA Support

Model Size: 85 × 100 × 89 mm

Model Weight: 112.4 g (Industrial PPA GF), 32.2 g (Industrial PPA Support)

Layer Height: 0.2 mm

Print Time: 6 hours 9 minutes

Phone Case Decorations

Filament: Hyper Speed PLA Pro

Model Size: 68 × 80 × 13 mm

Model Weight: 8.3 g

Layer Height: 0.15 mm

Print Time: 39 minutes

Printer	Raise3D E3		
Build Volume (W × D × H)	Single Extruder Print	Dual Extruder Print	
	330 × 240 × 240 mm (13 × 9.4 × 9.4 inch)	295 × 240 ×240 mm (11.6 × 9.4 × 9.4 inch)	
Machine Size (W × D × H)	607 × 596 × 465 mm (23.9 × 23.5 × 18.3 inch)		
Weight	Net Weight	Gross Weight (Carton Only)	Gross Weight (Carton with Pallet)
	33.3 kg (73.4 lbs)	42 kg (92.6 lbs)	49.5 kg (109.1 lbs)

General	Print Technology	Fused Filament Fabrication (FFF)
	Print Head System	IDEX Independent Dual Extruders
	Filament Diameter	1.75 mm
	Max Printing Speed	200 mm/s
	Max Volumetric Speed	16 mm^3/s
	Build Plate	Flexible Double-sided PEI Build Plate (Default), Flexible Steel Plate with BuildTak (Available)
	Build Plate Leveling	Mesh-leveling with Flatness Detection
	Heated Bed Material	Silicone
	Max Build Plate Temperature	110℃
	Nozzle Diameter	0.4 mm (Default), 0.2/ 0.6/ 0.8/ 1.0 mm (Available)
	Max Nozzle Temperature	330℃
	Layer Height	The E3 is compatible with 0.2, 0.4, 0.6, 0.8 and 1.0 mm nozzles, and the layer height can vary between 0.1-0.5 mm. To achieve stable print results, when using 0.4 mm nozzles, we recommend using a layer height between 0.1-0.3 mm.
	Surface Roughness Ra	< 2 μm (Hyper Speed PLA Pro Filament, Ironing enabled)
	Filament Run-out Sensor	Available
	Filter	HEPA Filter with Activated Charcoal
	Connectivity	Wi-Fi, LAN, USB port, Live Camera
	Noise Emission (Acoustic)	＜55 dB(A) when building (Tested in a quiet room, with the front door and top cover of the printer closed, at a distance of 1 meter)
	Operating Ambient Temperature	15-30℃, 10-90% RH non-condensing
	Storage Temperature	-25℃ to +55℃, 10-90% RH non-condensing
Electrical	Power Supply Input	100-240 V AC, 50/ 60 Hz 230 V @ 2 A
	Power Supply Output	24V DC, 350 W
Material	Raise3D Material	Hyper Core: PPA CF/ PPA GF/ ABS CF Hyper Speed: PLA/ ABS/ PETG CF/ PET CF/ PLA Pro Industrial: PPA CF/ PPA GF/ PET CF/ PET GF/ PETG ESD/ PET Support/ PPA Support/ PPS CF/ PA12 CF+ Premium: PLA/ ABS/ ASA/ PETG/ PC/ TPU-95A/ PVA+
	Flexible and Elastic Material	When equipped with the Flexible Filament Auxiliary Feeder, the E3 is compatible with TPE (TPU, TPE-A, TPE-S, TPE foam filaments, etc.), Shore (A) hardness between 95A and 80A (e.g. TPU-95A, 90A, 80A), as well as all Shore (D) hardness filaments.
	Third Party Material	Supported by Raise3D OMP (Open Material Program)*
Software	Slicing Software	ideaMaker
	Supported File Types	STL/ OBJ/ 3MF/ OLTP/ STEP/ STP/ IGES/ IGS
	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-A55 Quad 2 GHz
	Memory	2 GB
	Onboard Flash	16 GB
	OS	Embedded Linux
	Ports	USB 2.0 × 2, Ethernet × 1

*For detailed information and slicing profiles of the materials supported by Raise3D OMP, please visit https://www.ideamaker.io/.

US Office

13310 Pike Road, Stafford, TX 77477
+1-888 963 9028

Europe – Netherlands Office

Tenorweg 6, 3363LN, Sliedrecht
+31 (0)6 23872606

Europe – Portugal Office

R. do Vergão 80, 4520-614, São João de Ver, Portugal

China Office

Floor 13 A5, 1600 North Guoquan Road,
Yangpu District Shanghai 200438
+86 400 6367 888

inquiry@raise3d.com