RAISE3D Pro3 HS Series

Beyond Speed

3D Printing Large Composite Parts Made Simple

Built-in Hyper FFF® Technology

Auto Filament Switching

New RFID Filament Sensor

Motion Control Upgrade with a Closed-Loop Motor

New Printing Build Plate

2.5 kg Large Spool Storage Boxes (sold separately)

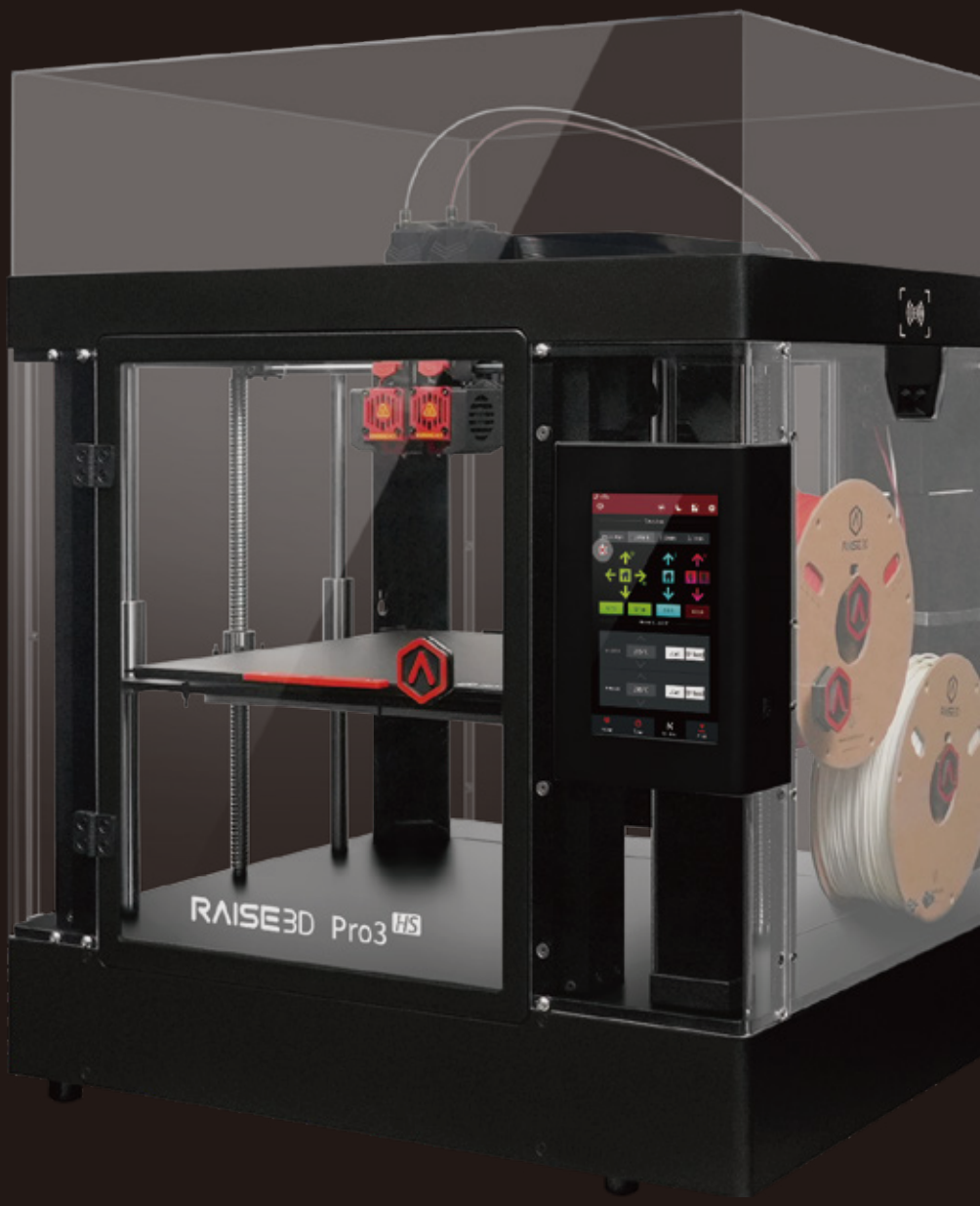
Raise3D Pro3 HS

Raise3D Pro3 Plus HS

The Raise3D Pro3 HS Series is a powerful professional-grade 3D printer that builds upon the Pro3 Series with integrated Hyper FFF® technology. It features leading speeds for printing composite materials with high efficiency and reliability. The upgraded motion control system with a closed-loop stepper motor further improves the precision and accuracy of high-speed printing, making it ideal for printing demanding industrial applications with minimal manual intervention.

Core Value Points

Boost Printing Speed, Production Efficiency, and Reliability



01 High Speed Printing with High-Performance Composite Materials

The Raise3D Pro3 HS Series supports 200-300 mm/s high-speed printing of composite materials, including the Hyper Core and Industrial high-performance materials for end-use applications, meeting the high standards and requirements from users, enhancing both production efficiency and product quality. As a result of this high-performance composite material support, the resulting printed parts perform effectively even in the most demanding end-use applications.

Built-in Hyper FFF® Technology

- High-flowrate hot end
- Active vibration reduction algorithm
- Standard speeds with thermoplastic filaments: 300 mm/s
- Standard speeds with fiber-reinforced Hyper Core filaments: 200-300 mm/s

Compatible with High-Performance Hyper Core and Industrial Materials

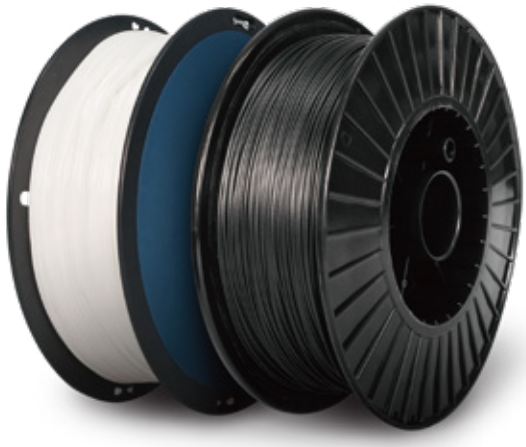
Wide choice of materials for demanding and flexible production.

A Wide Selection of Filaments to Serve Diverse Needs

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

OFP
(Open Filament Program)

The OFP (Open Filament Program) is a collaboration between Raise3D and filament manufacturers to identify and select top-performing filaments for Raise3D eco-system.

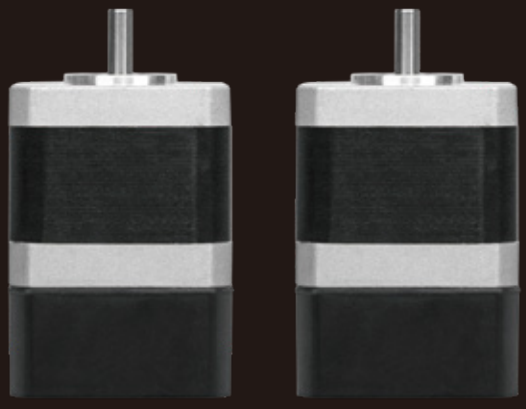


02 Enhanced Accuracy for Industrial Applications

The Raise3D Pro3 HS Series incorporates Hyper FFF® technology with a high-flowrate hot end and active vibration reduction algorithm for precise and reliable high-speed printing. Capable of printing at standard speeds of up to 300 mm/s, the Pro3 HS Series is also equipped with a closed-loop stepper motor in the transmission system, enhancing extruder movement control to achieve more precise high-speed printing without losing steps. The new build plate offers uniform magnetic adhesion, reducing model warping. An optimized coupling enhances motion stability, while the robust all-metal frame ensures smooth movement and precise positioning, resulting in high-quality prints.

Motion Control Upgrade with a Closed-Loop Motor

- Newly added closed-loop stepper enables more precise high-speed printing without losing steps
- Reduces noise by 27%, improving working environment



New Printing Build Plate

- 1 mm thinner for faster heating
- More uniform and powerful magnetic attraction
- Minimal model warpage
- Smooth movement
- Precise positioning
- High-quality print results

All-Metal Framework

- Robust all-metal frame ensures smooth movement and precise positioning for high quality printing

03

Longer-Lasting Reliability and Durability

Designed for high-volume industrial printing applications, the Raise3D Pro3 HS Series has been further optimized to enhance its reliability. Its strengthened hot end and all-metal nozzle, combined with a proven all-metal frame and dual-gear extruder, enable production for long hours. The stepper motors with optical encoders improve accuracy and long-term repeatability.

Strengthened All-Metal Hot Ends and Nozzles

- More durable for longer service life
- Ensures long-term production reliability

Silicon Carbide Nozzles

- Compatible with carbon fiber-reinforced filaments
- Resistant to wear and deformation for long-lasting performance and printing accuracy
- Requires less maintenance

Upgraded Couplings

- Double-diaphragm couplings for increased strength and lifespan
- Optimized optical shaft structure enhances tightness for increased durability

04 Maximize Production Efficiency with Minimal Manual Intervention

The Raise3D Pro3 HS Series features an auto filament switching function, enabling uninterrupted production. With the capability to print using two larger 2.5 kg filament spools, this machine can now continuously print with up to 5 kg of material. The newly-added RFID filament sensor identifies the filament and verifies the necessary parameters to prevent incorrect material usage. Additionally, the auto filament-unloading function reduces manual intervention, resulting in higher production efficiency and lower need for manual labor.

Auto Filament Switching

- Uninterrupted printing when one filament spool runs out
- Increases printing continuity and efficiency
- Reduces the risk of printing failure due to material depletion

2.5 kg Large Spool Storage Boxes (sold separately)

- Print up to 5 kg of filament at a time with two 2.5 kg external material boxes
- Continuous printing for up to 120 hours (assuming 1 kg /24 h)
- Reduces manual filament replacement frequency
- Improves production efficiency and continuity

New RFID Filament Sensor

- Identifies filament type and verify print parameters before the start of a print job
- Prevents use of incorrect material
- Increases efficiency and rate of print success

Application Examples

Ideal for High Demanding Industry Applications

Rim Mounting Fixture

Filament: Hyper Core PPA CF25
Model Size: 145 × 140 × 55 mm
Model Weight: 233.3 g
Layer Height: 0.02 mm
Print Time: 8 hours, 44 minutes
Application: Automotive Manufacturing Jigs and Fixtures
Requirements: High Strength, Durability, Precision, Lightweight, Customizable

Cooling Fan

Filament: Hyper Core ABS CF15
Model Size: 160 × 160 × 24 mm
Model Weight: 77.2 g
Layer Height: 0.2 mm
Print Time: 6 hours, 9 minutes
Application: End-Use Parts for General Industrial Equipment
Requirements: High Strength, Durability, Precision, Lightweight, Customizable

A-Pillar Cover

Filament: Hyper Core ABS CF15
Model Size: 160 × 160 × 24 mm
Model Weight: 77.2 g
Layer Height: 0.2 mm
Print Time: 6 hours, 9 minutes
Application: End-Use Parts for General Industrial Equipment
Requirements: High Strength, Durability, Precision, Lightweight, Customizable

Contact Bracket

Filament: Hyper Core PPA CF25
Model Size: 120 × 60 × 45 mm
Model Weight: 68.7 g
Layer Height: 0.2 mm
Print Time: 3 hours, 43 minutes
Application: Jigs and Fixtures
Requirements: High Strength, Durability, Precision, Lightweight, Customizable

Raise3D Pro3 HS Series Technical Specifications

Printer	Raise3D Pro3 HS		Raise3D Pro3 Plus HS	
Build Volume (W × D × H)	Single Extruder Print	Dual Extruder Print	Single Extruder Print	Dual Extruder Print
	300 × 300 × 300 mm (11.8 × 11.8 × 11.8 inch)	255 × 300 × 300 mm (10 × 11.8 × 11.8 inch)	300 × 300 × 605 mm (11.8 × 11.8 × 23.8 inch)	255 × 300 × 605 mm (10 × 11.8 × 23.8 inch)
Machine Size (W × D × H)	620 × 626 × 760 mm (24.4 × 24.6 × 29.9 inch)		620 × 626 × 1105 mm (24.4 × 24.6 × 43.5 inch)	
Weight	Net Weight	Gross Weight (Carton with Pallet)	Net Weight	Gross Weight (Carton with Pallet)
	54 kg (119 lbs)	75.7 kg (166.9 lbs)	64 kg (141 lbs)	88.7 kg (195.5 lbs)

General	Print Technology	Fused Filament Fabrication (FFF)
	Print Head System	Dual-head with Electronic Lifting System
	Filament Diameter	1.75 mm
	XYZ Step Size	0.78125, 0.78125, 0.078125 micron
	Standard Printing Speed	300 mm/s
	Build Plate	Flexible Steel Plate with BuildTak
	Build Plate Leveling	Mesh-leveling with Flatness Detection
	Heated Bed Material	Silicone
	Heated Bed Max Temperature	120℃
	Nozzle Diameter	0.4 mm (Default), 0.2/ 0.6/ 0.8/ 1.0 mm (Available)
	Max Nozzle Temperature	320℃
	Layer Height	The Pro3 HS Series is compatible with 0.2, 0.4, 0.6, 0.8 and 1.0 mm nozzles, and the layer height can vary between 0.05-0.6 mm. To achieve stable print results, when using 0.4 mm nozzles, we recommend using a layer height between 0.1-0.3 mm.
	Automatic Filament Switching	Available (Coming Soon)
	RFID Sensor	Available (Coming Soon)
	Filament Run-Out Sensor	Available
	Filter	HEPA Filter with Activated Charcoal
	Eve Smart Assistant	Available
	Connectivity	Wi-Fi, LAN, USB port, Live Camera
	Noise Emission	< 55 dB (A) While Printing
	Operating Ambient	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 @ 3.3 A
	Power Supply Output	24 V DC, 600 W
Material	Material Type	Hyper Core: PPA CF/ PPA GF/ ABS CF Hyper Speed: PLA/ ABS Industrial: PPA CF/ PPA GF/ PET CF/ PET GF/ PETG ESD/ PET Support/ PPA Support Premium: PLA/ ABS/ ASA/ PETG/ PC/ TPU-95A/ PVA+
	Third Party Material	Supported by Raise3D OFP (Open Filament 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 120 MHz FPU
	Logic Controller	NXP ARM Cortex-A9 Quad 1 GHz
	Memory	1 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 OFP, please visit https://www.ideamaker.io/.

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