Raise3D T450 Technical Specifications

The T450 is a professional FFF 3D printer built for round-the-clock production. With a build volume of 450 x 350 x 400 mm, its full metal frame ensures precision at speeds up to 600 mm/s. The unique TwinFlow™(Dual Extrusion) design enables multiple modes without complex XY calibration. The actively heated chamber (max chamber heating temperature of 70°C) ensures strength and accuracy with engineering materials. Monitored by over 20 sensors and AI vision, it transforms your workflow into predictable, planned output.

Printer	Raise3D T450	
Body	Build Volume (W × D × H)	450 × 350 × 400 mm (17.7 × 13.8 × 15.8 inch)
	Machine Size (W × D × H)	710 × 635 × 785 mm (28.0 × 25.0 × 30.9 inch)
	Maximum External Package Dimensions (W × D × H)	880 × 772 × 1076 mm (34.7 × 30.4 × 42.4 inch)
	Weight	Net Weight: 75.9 kg (167.3 lbs) Gross Weight (Carton Only): 80 kg (176.4 lbs) Gross Weight (Carton with Pallet): 98.2 kg (216.5 lbs)
	Frame Material	Aerospace-grade Aluminum Alloy
Extrusion	Print Technology	Fused Filament Fabrication (FFF)
	Print Head System	TwinFlow™ (Dual-Extrusion with Single-Nozzle Y-Junction Manifold)
	Print Mode	Single Extrusion; Dual Extrusion, Dual Extrusion High Flow
	Nozzle Diameter	0.4 mm (Default), 0.6 mm (Available)
	Nozzle Type	High Thermal Conductivity CuCrZr Base Nozzle with Solid Wear-Resistant SiC Tip
	Max Nozzle Temperature	420℃
	Filament Diameter	1.75 mm
	Layer Height	0.2 mm (0.4 mm nozzle)
	Printing Precision	IT11 Grade* *Test Filament: Raise3D Premium PLA
Speed	Max Printing Speed	600 mm/s
	Max Speed of Toolhead	1,500 mm/s*
	Max Acceleration of Toolhead	30,000 mm/s^2
	Max Flow for Hotend TwinFlow™ (Dual Extrusion)	80 mm^3/s** * Test parameters: Obtained at a Max Acceleration of Toolhead of 10,000 mm/s^2. ** Test parameters: Raise3D Hyper Speed ABS V2, 250 ℃ printing temperature, 0.4 mm nozzle, a single outer wall smooth structure.
Build Plate and Heated Bed	Build Plate	Flexible Double-sided PEI Build Plate
	Build Plate Leveling	Mesh-leveling with Flatness Detection
	Heated Bed Material	Silicone Heater Pad
	Max Build Plate Temperature	120℃
Chamber Temperature Control	Active Chamber Heating	Available
	Max Chamber Heating Temperature	70℃
	Electric Top Cover	Available
	Auxiliary Heat Dissipation Module	Available
Printing Environment	Filter	HEPA Filter with Activated Charcoal
	Operating Ambient Temperature	15-30℃, 10-90% RH non-condensing
	Storage Temperature	-25℃ to +55℃, 10-90% RH non-condensing
Electrical	Power Supply	T450 (220V): 200-240VAC, 50/60Hz, 230V@10A T450 (110V): 100-120VAC, 50/60Hz, 110V@15A
Material	Raise3D Material	Hyper Speed: PLA/ PLA Pro/ ABS/ PETG CF/ PET CF Industrial: PPA CF/ PET Support/ PPS CF Premium: PLA/ ABS/ ASA/ PETG/ TPU-95A Coming Soon: Industrial: PPA GF/ PET CF/ PET GF/ PETG ESD/ PPA Support Premium: PVA+
Software	Slicing Software	ideaMaker
	Supported File Types	STL/ OBJ/ 3MF/ OLTP/ STEP/ STP/ IGES/ IGS
	Supported OS	Windows/ macOS/ Linux
	Machine Code Type	GCODE
Sensor and Camera	Live Camera Resolution	1920 × 1080
	Nozzle Camera Resolution	2592 × 1944
	Filament Run-out Sensor	Available
	Power Loss Recovery	Available
	Flow Rate Detection	Available
	Spaghetti Detection	Available
	Nozzle Clumping Detection	Available
Connectivity and Network	Connectivity	Wi-Fi, LAN, USB port, Live Camera
	Ports	USB 3.0 × 1, Ethernet × 1
	Network	Wi-Fi, Ethernet
	Wi-Fi Protocol	WPA/ WPA2/ WPA3-PSK
Printer Controller	User Interface	7-inch Touch Screen
	Screen Resolution	1024 × 600
	Motion Controller	STM ARM Cortex-M7 550MHz DP-FPU
	Logic Controller	RK ARM Cortex-A55 Quad 2 GHz
	Memory	2 GB
	Onboard Flash	32 GB
	OS	Debian
	Electric Door Lock	Available
	Neural Processing Unit	Computing Power up to 1 TOPS (INT8), Supporting Mixed Precision Computing of INT8/ INT16/ FP16/ BFP16.

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Raise3D T700 Technical Specifications

The T700 is a professional FFF 3D printer built for round-the-clock production. With a build volume of 700 × 500 × 1000 mm, its full metal frame ensures precision at speeds up to 600 mm/s. The unique TwinFlow(TM) (Dual Extrusion, Single Nozzle) design enables multiple modes without complex XY calibration. The actively heated chamber (constant temperature up to 60°C) ensures strength and accuracy with engineering materials. Monitored by over 20 sensors and AI vision, it transforms your workflow into predictable, planned output.

Printer	Raise3D T700	
Body	Build Volume (W × D × H)	700 × 500 × 1000 mm (27.6 × 19.7 × 39.4 inch)
	Machine Size (W × D × H)	964 × 792 × 1478 mm (37.9 × 31.1 × 58.2 inch)
	Maximum External Package Dimensions (W × D × H)	1150 × 1060 × 1685 mm (45.28 × 41.73 × 66.34 inch)
	Weight	Net Weight: 150 kg (approx. 330.7 lbs)
	Frame Material	Aerospace-grade Aluminum Alloy
Extrusion	Print Technology	Fused Filament Fabrication (FFF)
	Print Head System	TwinFlow™ (Dual-Extrusion with Single-Nozzle Y-Junction Manifold)
	Print Mode	Single Extrusion; Dual Extrusion, Dual Extrusion High Flow
	Nozzle Diameter	0.6 mm (Default), 0.4 (Available)
	Nozzle Type	High Thermal Conductivity CuCrZr Base Nozzle with Solid Wear-Resistant SiC Tip
	Max Nozzle Temperature	420℃
	Filament Diameter	1.75 mm
	Layer Height	0.3 mm (0.6 mm nozzle)
	Printing Precision	IT11 Grade* *Test Filament: Raise3D Premium PLA
Speed	Max Printing Speed	600 mm/s
	Max Speed of Toolhead	1,500 mm/s*
	Max Acceleration of Toolhead	30,000 mm/s^2
	Max Flow for Hotend	TwinFlow™ (Dual Extrusion): 80 mm^3/s** * Test parameters: Obtained at a Max Acceleration of Toolhead of 10,000 mm/s^2. ** Test parameters: Raise3D Hyper Speed ABS V2, 250 ℃ printing temperature, 0.4 mm nozzle, a single outer wall smooth structure.
Build Plate and Heated Bed	Build Plate	Flexible Double-sided PEI Build Plate
	Build Plate Leveling	Mesh-leveling with Flatness Detection
	Heated Bed Material	Silicone Heater Pad
	Max Build Plate Temperature	120℃
Chamber Temperature Control	Active Chamber Heating	Available
	Max Chamber Heating Temperature	60 ℃
	Electric Top Cover	Available
	Auxiliary Heat Dissipation Module	Available
Printing Environment	Filter	HEPA Filter with Activated Charcoal
	Operating Ambient Temperature	15-30℃, 10-90% RH non-condensing
	Storage Temperature	-25℃ to +55℃, 10-90% RH non-condensing
Electrical	Power Supply	T700 (220V): 200-240VAC, 50/ 60 Hz, 230V@16A T700 (110V): 100-120VAC, 50/ 60 Hz, 110V@20A
Material	Raise3D Material	Hyper Speed: PLA/ PLA Pro/ ABS/ PETG CF/ PET CF Industrial: PPA CF/ PET Support/ PPS CF Premium: PLA/ ABS/ ASA/ PETG/ TPU-95A Coming Soon: Industrial: PPA GF/ PET CF/ PET GF/ PETG ESD/ PPA Support Premium: PVA+
Software	Slicing Software	ideaMaker
	Supported File Types	STL/ OBJ/ 3MF/ OLTP/ STEP/ STP/ IGES/ IGS
	Supported OS	Windows/ macOS/ Linux
	Machine Code Type	GCODE
Sensor and Camera	Live Camera Resolution	1920 × 1080
	Nozzle Camera Resolution	2592 × 1944
	Filament Run-out Sensor	Available
	Power Loss Recovery	Available
	Flow Rate Detection	Available
	Spaghetti Detection	Available
	Nozzle Clumping Detection	Available
Connectivity and Network	Connectivity	Wi-Fi, LAN, USB port, Live Camera
	Ports	USB 3.0 × 1, Ethernet × 1
	Network	Wi-Fi, Ethernet
	Wi-Fi Protocol	WPA/ WPA2/ WPA3-PSK
Printer Controller	User Interface	7-inch Touch Screen
	Screen Resolution	1024 × 600
	Motion Controller	STM ARM Cortex-M7 550MHz DP-FPU
	Logic Controller	RK ARM Cortex-A55 Quad 2 GHz
	Memory	2 GB
	Onboard Flash	32 GB
	OS	Debian
	Electric Door Lock	Available
	Neural Processing Unit	Computing Power up to 1 TOPS (INT8), Supporting Mixed Precision Computing of INT8/ INT16/ FP16/ BFP16.

Notes

* Test parameters: Obtained at a Max Acceleration of Toolhead of 10,000 mm/s^2.

** Test parameters: Based on test data of printing a single-layer thin-wall smooth structure with PLA material at 250 °C using a 0.4 mm nozzle.

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