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College of Engineering & Technology

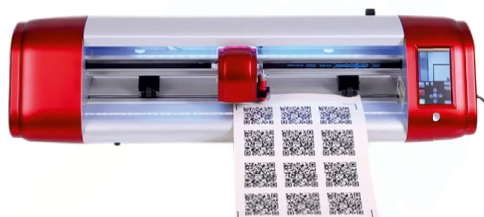
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VINYL CUTTING PLOTTER

SKYCUT C24



PARAMETER DETAILS

Max Media Width	720 mm
Max Cutting Width	610 mm
Max Contour Cutting Width	570 mm
Motor Type	Stepper
Max Cutting Force	800 g
Max Moving Speed	700 mm/s
Max Cutting Speed	600 mm/s
Cutting Precision	± 0.01 mm
Repeat Precision	0.082 mm
Display	Large Touch Screen
Auto Contour Cut	Camera-based
Connectivity	USB Flash / USB Cable / Wi-Fi (Optional)
Power	< 100 W
Working Environment	+5 °C to +35 °C
CorelDRAW Compatible	Yes

SUPPORTED MATERIALS

Vinyl
Cardstock
HTV (Heat Transfer Vinyl)
Fabric
EVA Foam
Reflective Film
Sticker Paper
Various Color Materials
Transparent Materials

APPLICATIONS

Sign making & decals
Custom apparel (HTV)
Stickers & labels
Packaging prototypes
Crafts & DIY projects
Mobile skins & screen protectors
Educational use

Do's

Use correct blade for material thickness
Keep cutting mat clean for adhesion
Perform test cuts before large jobs
Ensure proper media loading

Don'ts

Exceed maximum cutting force
Operate without proper ventilation for some materials
Use damaged or dull blades
Ignore machine error messages



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DUAL-NOZZLE FDM 3D PRINTER

BAMBU LAB H2D



SPECIFICATIONS

Parameter	Details
Build Volume (Single Nozzle)	325 × 320 × 325 mm ³
Build Volume (Dual Nozzle)	300 × 320 × 325 mm ³
Printing Technology	FDM, Dual Nozzle System
Max Print Speed	1000 mm/s
Max Acceleration	20,000 mm/s ²
Max Hotend Temperature	350 °C (All-Metal)
Max Heated Bed Temperature	120 °C
Active Chamber Heating	Up to 65 °C
Extruder Gear	Hardened Steel
Nozzle	Hardened Steel
Filament Diameter	1.75 mm
Supported Nozzle Diameters	0.2, 0.4, 0.6, 0.8 mm
Screen	5-inch, 720 × 1280 Touchscreen
Connectivity	Wi-Fi, Bambu-Bus, Micro-SD, LAN
Air Purification	G3 Pre-filter, HEPA H12, Activated Carbon
Motion Accuracy	5 μm Resolution Optical Motion Calibration

MATERIALS

Supported Materials

PLA, PETG, TPU, PVA, BVOH, ABS, ASA, PC, PA, PET, Carbon / Glass Fiber Reinforced PLA, Carbon / Glass Fiber Reinforced PETG, Carbon / Glass Fiber Reinforced PA, Carbon / Glass Fiber Reinforced PET, PPS, PPS-CF/GF

Applications

Professional engineering prototypes
 Multi-material and composite parts
 Functional fixtures and tooling
 Low-volume manufacturing with advanced materials
 Educational and research use

Do's

Ensure proper ventilation for engineering materials
 Use hardened nozzles for abrasive filaments
 Regularly maintain air filters and chamber
 Dry hygroscopic filaments before use

Don'ts

Open chamber door during high-temp printing
 Exceed maximum temperatures
 Use incompatible materials with dual extrusion
 Ignore error messages or sensor alerts


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DESKTOP FDM 3D PRINTER

BAMBU LAB P2S



SPECIFICATIONS

Parameter	Details
Build Volume	256 × 256 × 256 mm ³
Printing Technology	Fused Deposition Modeling (FDM)
Max Print Speed	600 mm/s
Max Acceleration	20,000 mm/s ³
Max Hotend Temperature	300 °C
Max Heated Bed Temperature	110 °C
Extruder Gear	Hardened Steel
Nozzle	Hardened Steel
Filament Diameter	1.75 mm
Supported Nozzle Diameters	0.2, 0.4, 0.6, 0.8 mm
Camera	1920 × 1080, 30 fps HD
Touchscreen	5-inch, 854 × 480
Connectivity	Wi-Fi, Bluetooth, USB, SD Card
Air Filtration	Activated Carbon Filter

MATERIALS

Supported Materials

PLA, PETG, ABS, ASA, TPU, PA, PC, PVA, PLA-CF, PETG-CF, ABS-GF, ASA-CF, PA6-CF, PA6-GF, PAHT-CF, PPA-CF, PET-CF, Support for PLA, Support for PLA/PETG, Support for ABS

Applications

Engineering prototypes
Educational and laboratory use
Functional parts and fixtures
General desktop manufacturing applications

Do's

Ensure proper ventilation for ABS/ASA
Use hardened steel nozzle for abrasive filaments
Keep build plate clean for bed adhesion
Monitor filament humidity and dry if needed

Don'ts

Open chamber door during high-temp printing
Exceed maximum temperatures
Use unsupported third-party modifications

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CREALITY CR-SCAN OTTER

3D SCANNER



SPECIFICATIONS

Parameter	Details
Scanning Accuracy	Up to 0.02 mm
Scanning Technology	Infrared Structured Light
Vision System	Four-lens Stereo Vision
Color Scanning	24-bit Full-Color
Scanning Speed	Up to 20 fps
Object Size Range	Small to large objects (approx. 10 mm to 2000 mm)
Anti-shake Technology	Yes
Data Interface	USB (wired)
Supported Output Formats	STL, OBJ, PLY
Software	Creality Scan
Operating System	Windows / macOS
Power Supply	5 V --- 3 A
Operating Temperature	-10 °C to 40 °C

FEATURES

High-precision scanning up to 0.02 mm
Four-lens stereo vision for small and large objects
Smooth handheld scanning with anti-shake tracking
Full-color texture capture
Supports scanning of dark and metallic objects (spray-free in many cases)
Fast real-time scanning
Lightweight and portable design
Intelligent alignment and point-cloud optimization

APPLICATIONS

Reverse engineering
Product design and development
Quality inspection and measurement
Cultural heritage and artifact digitization
Education and research
Medical and orthotic modeling
3D printing model creation
Animation, AR/VR content creation

Do's

Ensure stable lighting conditions
Keep object and scanner steady during scanning
Calibrate scanner as recommended
Use proper distance as guided by software
Clean object surface before scanning

Don'ts

Scan in extremely bright sunlight
Move scanner too fast
Skip calibration steps
Scan beyond recommended distance
Ignore software tracking warnings



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