

Rapid Prototyping

FAST, AFFORDABLE 3D MODEL PRINTING

NEW



HP Designjet 3D Printer



1200es 3D printer shown with optional colour-matched stand.

3D PRINTERS

Nothing communicates ideas faster than a three dimensional part or model. With a 3D Printer, you can bring CAD files and design ideas to life – right from your desktop. It's an efficient and cost-effective way to catch design flaws early on in the production process.

BST (Breakaway Support Technology) features a manual support removal process, whereby the designer removes the model from the system and breaks the support away by hand.

SST (Soluble Support Technology) features an automated support removal process, whereby the designer removes the model from the system and places it into a cleaning bath in which the support structures are dissolved – essentially allowing for “hands-free” printing.

Both the new **HP Designjet 3D** and **HP Designjet 3D Colour** Printers are available in SST only. These affordable desktop 3D Printers offer a “plug and play” operation - just load the easy-to-use software on your Windows network and start printing. In addition, the Designjet 3D Colour Printer offers ABS modelling in a choice of 8 colours, with a larger working envelope.

The **Dimension 1200es** 3D Printers are available in two models: BST & SST. These 3D Printers, which are powered by leading Stratasys technology, are very easy to install and operate - both producing durable working models from ABS and ABSplus.

All the above 3D Printers operate in an “office” environment and produce strong, high-quality ABS models, allowing you to test for form, fit and function.

You simply click “print” and your design is sent to the printer.

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3D MODEL PRINTING

Unlike “appearance” prototypes produced in weak materials, HP and Dimension 3D Printers generate durable, working models in ABS plastic. ABS 3D prints can withstand rigorous functional testing, which is why ABS is the material of choice for leading manufacturers.

HP DESIGNJET 3D SUPPORT REMOVAL SYSTEM



- Removes supports from your models automatically.
- Utilises detergent in soluble packaging, keeping the operation completely clean.
- Plumbed in, so no need for manual filling or draining.

SUPPORT CLEANING APPARATUS SCA 1200



- Stainless steel tank.
- 31.5 litre capacity.
- Stainless steel part basket.
- Over-temperature sensor, indicator & buzzer.
- Liquid level sensor & indicators.
- Drain hose included.
- For use with SST models only.



MECHANICAL DETAILS	HP Designjet 3D	HP Designjet 3D Colour
Machine Size:	635 x 660 x 800mm	635 x 660 x 800mm
Machine Weight:	76 kg	76 kg
Build Volume / Size:	203 x 152 x 152mm	203 x 203 x 152mm
Material:	ABSplus™ in ivory	ABSplus™ in ivory, black, dark grey, blue, red, nectarine, fluorescent yellow, olive green
Power:	230V - 50Hz	230V - 50Hz

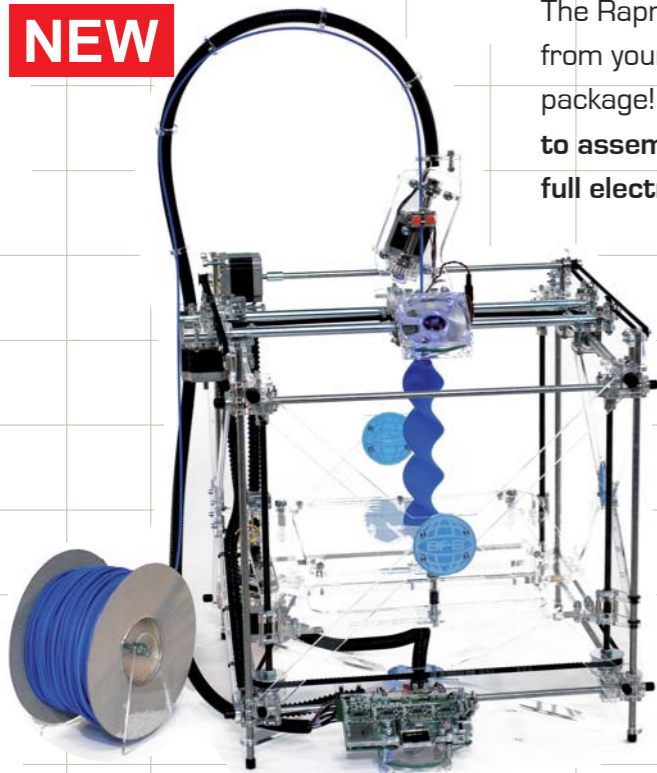
MECHANICAL DETAILS	Dimension BST 1200es / SST 1200es
Machine Size:	838 x 737 x 1143mm
Machine Weight:	148 kg (326lbs)
Build Volume / Size:	254 x 254 x 305mm
Material:	Featuring ABSplus™ in natural, black, dark grey, blue, red, nectarine, fluorescent yellow, olive green
Power:	230V - 50Hz



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Rapman 3D Prototyper

KIT FORM V3

NEW

The Rapman is a 3D printer which produces solid objects from your STL files which can be drawn on almost any CAD package! **The Rapman Kit V3 is supplied in kit form for you to assemble yourself including all mechanical parts and full electronics.**

RAPMAN 3D

- Runs off an SD card and has a USB port to allow connection to your computer
- Small OLED display on the control panel
- Uses stepper direct drive motors
- Manufactured using precision cut parts – from high impact acrylic and zinc-plated bars
- Uses a variety of affordable materials, ABS, PLA and more
- Teaching materials and full support available online
- The machine can be used as a teaching resource and a full rapid prototyping system
- Approximately 15-20 hours assembly time, then start printing!

RAPMAN 3D PROTOTYPER	
Overall dimensions of the machine:	650mm x 570mm x 820mm
Maximum print dimensions:	650mm x 570mm x 510mm with the extruder removed
Print resolution:	275mm x 205mm x 210mm
Printing speeds:	0.1mm in the x and y and 0.4mm in the z (dependant also on temperature and material)
Materials which can be used:	The Version 3 has a maximum feedrate of approximately 17 mm ³ per second but we don't recommend running at that speed continually. It can comfortably be operated at 7mm ³ per second (tested with ABS - figures will be less for HDPE). Also don't forget that the speed limit is not entirely down to the extruder but also down to thermal issues - go too fast and you get a molten mess! There are many different materials which can be used to print with. We use thermoplastic polymers (listed below) but you could use other materials too. ABS (Acrylonitrile Butadiene Styrene) (Colours White, Black, Blue, Green) HDPE (High Density Poly Ethylene) LDPE (Low Density Poly Ethylene) PP (Poly Propylene) uPVC (unplasticised Poly Vinyl Chloride)
Shipping details:	Package dimensions: 610mm x 410mm x 160mm Package weight: 18kg

**NEW**

BFB 3D 3000 3D Prototyper

PRE-ASSEMBLED

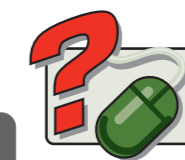


Professional quality low cost 3D printing. The most affordable 3D Prototyping system available to schools and colleges. **The BFB 3D 3000 is supplied pre-assembled and ready to use!**

BFB 3D 3000

- The system is driven via SD Card, meaning you can operate it without the need for a PC
- USB port included for computer connection, enabling boot-loadable upgrades
- Full control available during printing
- OLED display on the control panel
- Available with double and triple head assemblies for multiple colour and material combinations
- Uses a variety of affordable materials - upvc, polycarbonate, hdpe, ldpe, polypropylene, abs, pla (poly lactic acid) & polycarbonate (cappa) - extrudes at lower temperatures (170oC)
- Suitable for teaching across key stages 3, 4 and 5. Also used in many universities, both in the UK and worldwide for final year projects

BFB 3D 3000 3D PROTOTYPER	
Overall dimensions of the machine:	810mm x 500mm x 580mm
Maximum print dimensions:	550mm x 500mm x 580mm with the extruder removed
Printing speeds:	210mm x 275mm x 230mm
Power (max):	Maximum 15mm ³ per second (print material dependent)
Max extruder temp:	60W 5A @ 12V - head dependent
X & Y Drives:	270oC
Z Drive:	Timing belt, driven by microstepping stepper motor
Materials which can be used:	Leadscrew, driven by microstepping stepper & timing belt
	ABS - Acrylonitrile Butadiene Styrene (Colours White, Black, Blue, Green) HDPE - High density polyethylene LDPE - Low density polyethylene PP - Polypropylene uPVC - Unplasticized polyvinylchloride PLA - Polylactic Acid (Colours Natural, Blue and Red)



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To get you up and running, Denford also offer a range of CNC Routers, Lasers, Milling Machines and Lathes, together with tooling packages, workholding kits and courseware.

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