

TechSoft 3D Printer range



What is 3D printing?

3D printing is Additive Rapid Prototyping. There are a number of different technologies around, and many different materials including metals (and even concrete!) can be 'printed' commercially. Most 3D printers for schools use plastics, and the Fuse Deposition Modelling (FDM) process, which involves many thin layers of plastic building up the desired shape. 3D printing has been around for many years in professional design (and production) environments, but a new era of lower cost machines means that they are now available to schools - without breaking the bank.

How does it work?

Students start with a 3D solid model, created in software such as SOLIDWORKS Education Edition. The file is saved in 'STL' format and loaded into the post-processing software supplied with the 3D printer. The user chooses settings (eg., build quality, speed, model placement). The software then 'slices' the 3D model into a stack of multiple tool paths, and sends the print job to the machine. Appropriate filament is loaded and the printing process begins. The process is fascinating to watch, as molten plastic is extruded from the 3D printer tip as it moves around, creating the shape of each layer, one after another. When complete, the model is removed from the machine. It really is that simple!

Why Does My School Need One?

3D CAD is essential in modern D&T, and sooner or later, students will need to turn their creative ideas into real parts for projects. The low cost and setup time make the technology ideal to promote the iterative design process that the curriculum demands. It is important for students to learn that getting it wrong is not a mistake, rather it is a step towards getting it right.

Which Machine Should I Choose?

There are a number of basic variables such as cost, material types and build envelope to take into consideration, and many of our machines have their own unique features and specifications - we have options to suit requirements at all levels. 'Support' is required for models with overhangs, and depending which model you choose this can either be removed with hand-tools, or a secondary soluble material can be printed and soaked away later on. The professional machines in our range from Stratasys offer levels of accuracy, repeatability, and reliability in specialist ABS plastics that simply isn't possible with lower-end machines. Of course, this is reflected in the price, but these machines will sit quietly in the corner of a busy college or university design department, producing flawless models 24 hours a day with a minimum of maintenance.

What else do I need?

If you don't already have a 3D solid modelling package, SOLIDWORKS (see page 18) is the ideal partner for your 3D printer.

Is a 3D printer all I will need then?

A 3D printer is an important part of the range of key equipment necessary to successfully deliver today's D&T curriculum, but other 3D rapid prototyping technologies should not be forgotten. Whilst the range of material options are increasing, at a school level 3D printing is limited to certain types of plastics. In situations where a specific material is required, Subtractive Rapid Prototyping may be required (see our range of 3D capable millers & routers on page 64).

The TechSoft Advantage

The market for 3D printers is (quite frankly) a mine-field, but our experience allows us to carefully select the models most appropriate for the classroom environment. TechSoft are proud of our reputation for excellent customer service, and person-to-person contact is an important feature of this. We will be your first point of contact for materials, consumables, and advice, and you will have unlimited access to technical support via phone or email.



3D Printing

Machine Comparison Chart

Machine	Page	Price	Build Size	Min Layer Resolution	Model Material	Dual Head	Support Removal
Silhouette							
Alta Plus	244						
Robox							
RoboxDual	53	£#01895	210 x 150 x 100mm	0.02mm	PETG/PLA/ABS/Other	Yes	Manual/Soluble
RoboxPro	53	£#18185	300 x 210 x 400mm	0.05mm	PETG/PLA/ABS/Other	Yes	Manual/Soluble
Witbox							
Witbox 2	54	£#17827	297 x 210 x 200mm	0.02mm	PLA / Flexible	No	Manual
Ultimaker							
Ultimaker 2+ Connect	55		223 x 220 x 205mm				
Ultimaker 3	55	£#18395	197 x 215 x 200mm	0.02mm	PLA/ABS/Other	Yes	Manual/Soluble
Ultimaker 3 Extended	55	£#17467	197 x 215 x 300mm	0.02mm	PLA/ABS/Other	Yes	Manual/Soluble
Ultimaker S3	55						
MakerBot							
Makerbot Sketch	56		150 x 150 x 150mm				
Replicator+	56	£#16869	295 x 195 x 165mm	0.1mm	PLA	No	Manual
Replicator Z18	56	£#16946	305 x 300 x 457mm	0.1mm	PLA	No	Manual
Method	56	£#21791	190 x 190 x 196mm	0.2mm	PLA/PETG/Other	Yes	Soluble
Method X	56	£#21788	190 x 190 x 196mm	0.2mm	PLA/PETG/Other	Yes	Soluble
Roland							
ARM-10	57	£#12702	130 x 70 x 70mm	0.1mm	UV Resin	No	Manual
Stratasys Mojo							
Mojo	58	£#12619	127 x 127 x 127mm	0.178mm	ABS Plus	Yes	Soluble
Stratasys uPrint							
uPrint SE	58	£#17659	203 x 152 x 152mm	0.245mm	ABS Plus	Yes	Soluble
uPrint SE Plus	58	£#16635	203 x 203 x 152mm	0.254 / 0.33mm	ABS Plus	Yes	Soluble

Machine	Page	Price	Warranty	Enclosed	Connection	Software Provided (stl to manufacture)
Silhouette:						
Alta Plus:	244					
Robox						
Robox	53	£#01894	2 Year Return to Base	Yes	USB	Automaker
RoboxDual	53	£#01895	2 Year Return to Base	Yes	USB	Automaker
RoboxPro	53	£#18185	2 Year Return to Base	Yes	USB/Ethernet/WiFi	Automaker
Witbox						
Witbox 2	54	£#17827	2 Year Return to Base	Yes	USB	Cura
Ultimaker						
Ultimaker 2+ Connect	55					
Ultimaker 3	55	£#18395	1 Year Return to Base	No	USB Stick/Ethernet/WiFi	Ultimaker Cura
Ultimaker 3 Extended	55	£#17467	1 Year Return to Base	No	USB Stick/Ethernet/WiFi	Ultimaker Cura
Ultimaker S3:	55					
MakerBot						
Makerbot Sketch	56					
Replicator+	56	£#16869	1 Year Return to Base	No	USB/Ethernet/WiFi	MakerBot Print
Replicator Z18	56	£#16946	1 Year Return to Base	Yes	USB/Ethernet/WiFi	MakerBot Print
Method	56	£#21791	1 Year Return to Base	Yes	USB/Ethernet/WiFi	MakerBot Print
Method X	56	£#21788	1 Year Return to Base	Yes	USB/Ethernet/WiFi	MakerBot Print
Roland						
ARM-10	57	£#12702	1 Year On-Site	Yes	USB	monoFAB Player AM
Stratasys Mojo						
Mojo	58	£#12619	1 Year Return to Base	Yes	USB	Print Wizard
Stratasys uPrint						
uPrint SE	58	£#17659	1 Year Return to Base	Yes	Ethernet	Catalyst EX
uPrint SE Plus	58	£#16635	1 Year On-Site	Yes	Ethernet	Catalyst EX

See Product Guide Supplement for Updated Information

Robox, RoboxDual, RoboxPro



What is a Robox?

There are three models to choose from in the Robox range – Robox, RoboxDual, and RoboxPro. What they all have in common is simplicity, reliability and professional build quality in a wide range of materials, without the need for setup or tweaking. All models have been designed with safety and visibility in mind - the transparent cover is automatically locked when a build is in progress, also preventing thermal shrinkage which is often a problem when using engineering materials such as ABS, Nylon or polycarbonate with open-frame 3D printers.



About the Hardware

The removable print bed is made from polyetherimide, a plastic that becomes sticky when hot - no tape or glue is required! Once the bed cools down items lift away easily without the need for tools. Heads for different applications can be swapped without tools with the simple HeadLock™ system. The SmartExtruder™ feed system allows high flow rates, automatic loading, and measures the filament used. The nozzles use patented needle-valve flow control to lock off and prevent unwanted material escaping from the nozzle. Dual material heads allow the capability to use two materials in the same build – if breakaway or soluble support materials are used models of unlimited complexity are possible.



Software

The intuitive Automaker software provides a straightforward three step process – Add file > Choose Quality > Print. The microchipped SmartReel™ filament system tells the software which material is loaded, so print settings are programmed automatically. Calibrations are automatic – there are no manual adjustments, bed levelling or preparation before printing.



Robox 3D Printer

The Robox is a safe, high quality desktop 3D printer you can afford. The standard QuickFill™ dual nozzle single material head is fitted with a 0.3mm nozzle for the parts of the print you see, and a 0.8mm 'fast infill' nozzle to print the interior, resulting in faster print times.



Specification

Max build size: 210 x 150 x 100mm
 No. Extruders: 1
 Model Materials: PETG, PLA, ABS and more
 Slice Resolution: 0.02mm (20 microns)
 Interface: USB
 Dimensions: 370(W) x 340(D) x 240(H)mm
 Weight: 8.3kg

RoboxDual 3D Printer

The RoboxDual includes a Dual Material Head with two extruders giving the ability to print two materials simultaneously. As well as printing in two colours, the dual material head makes it possible to create support structures using a breakaway or dissolvable material. A standard single material head is also supplied with a RoboxDual, and can be changed in minutes for simple models where the QuickFill™ technology will be an advantage.



Specification

Max build size: 210 x 150 x 100mm
 No. Extruders: 2
 Model Materials: PETG, PLA, ABS and more
 Support Materials: Breakaway or Soluble
 Slice Resolution: 0.02mm (20 microns)
 Interface: USB
 Dimensions: 370(W) x 340(D) x 240(H)mm
 Weight: 9.5kg

RoboxPro 3D Printer

The RoboxPro offers a significant increase in build volume, whilst retaining the proven technology of the smaller machines. This model includes a SingleX head fitted with 0.6mm nozzle, making it possible to use abrasive engineering grade materials with high structural strength without risking damage to the nozzle. QuickFill™ and DualMaterial™ heads are also included, and these can be changed in minutes. The RoboxPro is fitted with a 5" touchscreen control panel, and it is possible to monitor and control printing remotely. The build chamber is climatically controlled and output air is purified via removable HEPA and active charcoal filters.

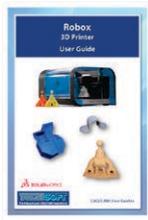


Specification

Max build size: 300 x 200 x 400mm
 No. Extruders: 2
 Model Materials: PETG, PLA, ABS and more
 Support Materials: Breakaway or Soluble
 Slice Resolution: 0.05mm (50 microns)
 Interface: Ethernet & WiFi
 Dimensions: 510(W) x 510(D) x 610(H)mm
 Weight: TBC

What's Included

Each Robox is supplied with a TechSoft User Guide. This gives you everything you need to get the machine out of the box and earning its keep in the shortest time possible. Not only does it take you step by step through using the Automaker software to manufacture a pre-designed 3D part, it also shows how to design and then manufacture your first 3D part using SOLIDWORKS 3D CAD software (60 day trial version supplied for any educational users that do not have this software).



Prices £*

*See Pricing Information on page 2

Education Packages

MP-RBX1	Robox 3D Printer. Includes machine, software, TechSoft User Guide + 1 reel material.
MP-RBX2	RoboxDual 3D Printer. Includes machine, software, TechSoft User Guide + 1 reel material.
MP-RBXP1	RoboxPro 3D Printer. Includes machine with dual material head, software, TechSoft User Guide + 1 reel material.

Materials and Accessories

For our full range of accessories and materials see page 60.

Recommended Software

SOLIDWORKS (page 18)

3D Printing

Witbox 2



About the Hardware

The auto-levelling system employs inductive sensor technology using a magnetic field to calibrate tip height with utmost precision. The resulting print quality is impeccable, and no manual adjustments are required.

A LokBuild base is included avoiding the need for messy adhesives, hair-spray, acetone or masking tape. This unique product provides a stable printing surface with excellent adhesion, avoiding warpage, and the frustration (and possible printer damage) caused by prints lifting part way through a build. When printing is complete the model can be removed cleanly with minimal effort.



Software

To prepare the model for printing, the Witbox 2 is fully compatible with well-known Cura or Slic3r software. Both packages are simple, intuitive and widely used in the 3D printing industry. Files can be transferred directly via USB, or saved to SD card and loaded via the built in reader.



Specifications

Max Build Size:	297 x 210 x 200mm
No. Extruders:	1
Model Material:	PLA (+ others)
Slice Resolution:	0.02mm (20 microns)
Interface:	SD Card (Connects to computer via USB)
Weight:	34kg
Dimensions:	508(W) x 484(D) x 461(H)mm
Warranty:	2 Year Return to Base

Witbox 2 3D Printer

About BQ

BQ are one of the European leaders in technology - manufacturing 3D printers, robotics, smart phones and tablets from their factory in Spain. Building on the success of the Witbox (which ranked in the top five best 3D printers worldwide) BQ have developed the Witbox 2 - a ready-to-use printer perfect for an educational environment, offering exceptional value for money. The Witbox 2 combines a huge print area (the volume of five reams of A4 paper!) with phenomenal precision and print quality. Classroom safety is a key feature, with the fully enclosed, lockable design.



Designed for Reliability

In any 3D printer the extruder is a key component, and poor design or manufacture can result in endless frustration. BQ have designed and developed a new extruder for the Witbox 2, incorporating a Double Drive Gear traction system which provides consistent and flawless filament feed. A wide range of exciting filaments are compatible such as bronze, copper, wood, brick, silk, linen, colour change, fluorescent, and even truly flexible materials like FilaFlex. In fact any filament can be used, and BQ have such confidence in their design that this will not affect the 2 year warranty provided with the printer.



Prices £*

*See Pricing Information on page 2

Witbox 2 3D Printer

MP-WB2	Witbox 2 3D Printer with LokBuild Base. Includes machine, downloadable software + 1 reel 1kg PLA material.
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Mixed Filament Pack

TMP-WBM10-PK1	Witbox Filabuster Pack. Mixed Pack of 25 x 10m 'wraps' of PLA filament for Witbox. 14 standard colours + 4 fluorescent colours + 7 specialist filaments + 1 empty filament reel (filament colours may vary)
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Standard PLA Filament

TMP-WBMR-COL	Witbox Reel of 1.75mm PLA Filament (1kg, 330m approx). 17 Colours Available.
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Flexible Filament

TMP-WBM10-FFCOL	Witbox 10m 'wrap' of Flexible Filament. Available in Silver, Skin Colour 1 and Skin Colour 2 (Brown)
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Colour Change Filament

TMP-WBM10-CGCOL	Witbox 10m 'wrap' of Colour Change Filament. Available in Blue Green to Yellow Green; Grey to White; UV White to Purple. Please specify colour required.
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Other Specialist Filament

TMP-WBM10-WF	Witbox 10m 'wrap' of Woodfull Filament
TMP-WBM10-BZ	Witbox 10m 'wrap' of Bronze Filament
TMP-WBM10-CU	Witbox 10m 'wrap' of Copper Filament

Accessories

TMP-WB-FP	Witbox LokBuild Base 305 x 305mm
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Recommended Software

SOLIDWORKS (page 18)

Ultimaker 3D Printers

What is an Ultimaker?

Developed in the Netherlands, the original Ultimaker was one of the first low cost 3D printers on the market. Since then, a range of award winning models have been developed and have met great success in all markets with excellent feedback from users worldwide.

About the Hardware

All Ultimaker models have excellent visibility with an open and easily accessible build platform. A heated glass bed ensures that most materials adhere firmly to the build surface without aid from glue or tape. With the Ultimaker 3, active build plate levelling routine is automatic – after levelling the build plate approximately using the knurled nuts in each corner, the printer takes over and stores offset values to compensate for any inaccuracies. Nozzles are interchangeable, allowing a range of possible resolutions between 0.25 and 0.8 depending on the quality required.



Software

Reliability and ease of use doesn't stop with hardware - Ultimaker has also developed the highly successful Cura software, engineered to get the most out of their 3D printers. Integration between software, 3D printer and materials is stable and seamless – it's simple to use for beginners but packed with all the tools and features that expert users will expect. To ensure print quality is perfect every time Cura has built in profiles optimised for Ultimaker materials.



Ultimaker

Ultimaker 3 & 3 Extended 3D Printers



With dual nozzles students can truly unleash their imagination, building dissolvable PVA or breakaway supports for complex geometry with overhangs. A material recognition system means the software updates printing profiles automatically whenever Ultimaker materials are loaded and a built in camera allows you to monitor printing remotely via Wi-Fi. The already generous build envelope is expanded by a further 100mm with the Ultimaker 3 Extended+.

Specification

Max build size: 197 x 215 x 200mm (Ultimaker 3)
197 x 215 x 300mm (Ultimaker 3 Extended)
No. Extruders: 2
Model Material: PLA, ABS and more (see page 61)
Support Material: Breakaway and Soluble
Slice Resolution: 0.02mm (20 microns)
Interface: USB stick, Ethernet & WiFi
Dimensions: 342(W) x 505(D) x 588(H)mm (Ultimaker 3)
342(W) x 505(D) x 688(H)mm (Ultimaker 3 Extended)
Weight: 10.6kg (Ultimaker 3)
11.3kg (Ultimaker 3 Extended)

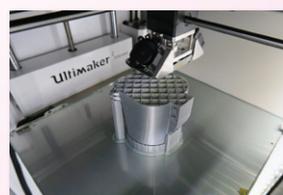
Ultimaker 2+ Connect 3D Printer



The Ultimaker 2+ connect is one of the most advanced, precise and reliable desktop 3D printers on the market. Incredibly simple to use, with built-in support of a wide range of materials, this is a very versatile printer, delivering consistent results as well as being efficient and user-friendly. The already generous build envelope is expanded by a further 100mm with the Ultimaker 2 Extended+. The already generous build envelope is expanded by a further 100mm with the Ultimaker 2 Extended+. The already generous build envelope is expanded by a further 100mm with the Ultimaker 2 Extended+.

Specification

Max build size: 223 x 220 x 205mm
No. Extruders: 1
Model Material: PLA, ABS and more (see page 61)
Min Slice Resolution: 0.02mm (20 microns)
Interface: USB
Dimensions: 342(W) x 493(D) x 588(H)mm
Weight: 11.3kg



Prices £*

*See Pricing Information on page 2

Ultimaker 3D Printers

MP-UM2PC	Ultimaker 2+ Connect 3D Printer	
MP-UM3	Ultimaker 3 3D Printer	
MP-UM3E	Ultimaker 3 Extended 3D Printer	

Accessories

TMP-UM-BED1	Adhesion Sheet	
TMP-UM-TAPE1	Blue Tape	
TMP-UM-FIX1	Dimafix - Can	
TMP-UM-FIX2	Dimafix - Pen	

Materials

For Materials see page 61

Recommended Software

SOLIDWORKS (page 18)

3D Printing

Makerbot

Makerbot 3D Printers

What is a MakerBot?

In 2009, MakerBot were there right at the beginning of the new generation of affordable 3D printers. Now, with backing from Stratasys (market leaders in industrial 3D printing) this experience has led to the evolution of a range of 3D printers widely used by hobbyists, design professionals and educators. The MakerBot Replicator+ model has excellent visibility with an open and easily accessible build platform, and the Replicator Z18 features a locking door for enhanced safety and improved climatic control.



Keeping it Simple

Ready to go, right out of the box. MakerBot 3D printers offer a straightforward setup experience and easy-to-use software with no tinkering required.



Often, good engineering design is a case of 'keep it simple', and the MakerBot range are designed to use a single material (PLA or ABS) with a single extruder. The quick-change MakerBot Smart Extruder+ has been rigorously tested in development for over 160,000 cumulative hours (that's 18 years!) to ensure long lasting reliability.

Time v Resolution

A minimum layer resolution of 100 microns make smooth-to-the-touch surfaces a reality without sanding or finishing. At the other end of the spectrum, the settings can be switched to 400 microns to produce a fast draft for quick iterations of an evolving design. The innovative MinFill print mode saves time and money by printing only the minimum internal supports in areas that require structural support.



About the Hardware

The new flexible build plate with 'Grip Build' surface ensures that prints adhere firmly resulting in reduced warping and curling, and remove easily when the job is complete. The build plate is factory-levelled so your Replicator+ is ready to use. All models have a built-in camera for print monitoring which can be accessed from any browser on any device, so you no longer need to rush your lunch to keep tabs on how that complex print is progressing!



Software

The simple and intuitive MakerBot Print software is included. The setup process (with built-in animated preview) is quick and straightforward, and the software even allows fine-tuning of settings during printing. Files can be transferred to all models via direct USB connection, WiFi or wired ethernet connectivity.



Prices £*

*See Pricing Information on page 2

MakerBot 3D Printers

TM-MBSCB	Makerbot Sketch Classroom Bundle. Contains 2 Makerbot Sketch 3D Printers, 3 blue PLA filament, 3 yellow PLA filament, 4 build beds, print toolkit, 2 teacher certification, 10 student certification.
TM-MBRP	MakerBot Replicator+ 3D Printer
TM-MBZ18	MakerBot Replicator Z18 3D Printer
TM-MBM	MakerBot Method 3D Printer
TM-MBMX	MakerBot Method X 3D Printer

Recommended Extras for Makerbot Method X

TMP-MBM-EXT1	Model 1 Performance Extruder
TMP-MBM-EXT2	Support 2 Performance Extruder
TM-DIM-CS10	Stratasys SCA-1200HDT Clean Station
TMP-MB-EC1	24 Pks of 2 Ecworks Tablet Cleaning Agent

Materials

For Materials see page 61.

Recommended Software

SOLIDWORKS (page 18)

MakerBot Sketch Classroom Bundle

The MakerBot Replicator+ combines unparalleled performance with superior results and lasting reliability. For greater reliability and precision, the Replicator+reliability and d



Specification

Max build size: 150 x 150 x 150mm
 No. Extruders: 1
 Model Material: MakerBot Sketch PLA, MakerBot Sketch Tough
 Layer Resolution: 100-400microns. Print mode tuned for 200 microns.
 Interface: USB, Ethernet, WiFi
 Dimensions: 423.1(W) x 365(D) x 433.4(H)mm
 Weight: 11.8kg

MakerBot Replicator+

The MakerBot Replicator+ combines unparalleled performance with superior results and lasting reliability. For greater reliability and precision, the Replicator+ features a redesigned gantry and Z-axis, with strengthened components.



Specification

Max build size: 295 x 195 x 165mm
 No. Extruders: 1
 Model Material: PLA Filament
 Slice Resolution: 0.1mm (100 microns)
 Interface: USB, Ethernet, WiFi
 Dimensions: 610(W) x 570(D) x 450(H)mm
 Weight: 18kg

MakerBot Replicator Z18

Ideal for a department with ambitious and imaginative students, the massive build volume of the Z18 makes it possible to print complex full-scale prototypes and parts at a vastly lower cost than industrial 3D printers. Despite the impressive specifications, this model is as simple to set up as more basic models in the range.



Specification

Max build size: 305 x 300 x 457mm
 No. Extruders: 1
 Model Material: PLA Filament
 Slice Resolution: 0.1mm (100 microns)
 Interface: USB, Ethernet, WiFi
 Dimensions: 650(W) x 719(D) x 1060(H)mm
 Weight: 52kg

MakerBot Method & Method X

The MakerBot Replicator+ combines unparalleled performance with superior results and lasting reliability. For greater reliability and precision, the Replicator+ features a redesigned gantry and Z-axis, with strengthened components. For greater reliability and precision, the Replicator+ features a redesigned gantry and Z-axis, with strengthened



Specification

Max build size: 190 x 190 x 196mm (single extrusion)
 152 x 190 x 196mm (dual extrusion)
 Model Material: PLA, Tough, PVA, PETG
 Layer Resolution: 20 - 400 microns
 Interface: USB, Ethernet, WiFi
 Dimensions: 437(W) x 413(D) x 649(H)mm
 Weight: 29.5kg



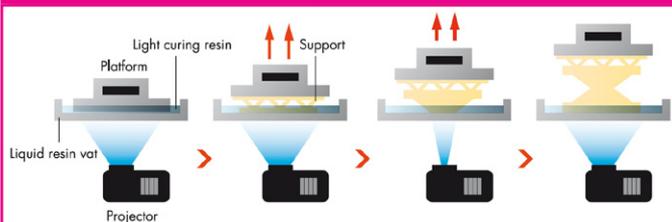
New 3D Printer from Roland

What is an ARM-10?

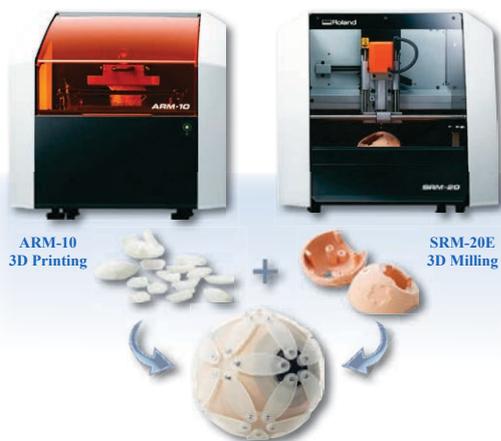
The Roland ARM-10 is a revolutionary new 3D-printing device that builds smooth, precise models using photo-sensitive imageCure liquid acrylic resin. The machine is driven by included software that accepts 3D .stl files and converts them into a series of slices that build to complete the model. Models are then created by projecting an image of each slice onto the resin-wet base of the build platform. The software takes care of any structural support needed and automatically includes this into the build. ARM-10 technology brings a number of unique benefits. Because the model is produced in suspension, resin usage is minimised and less material is needed to create support structure. In contrast to scanning or rastering techniques, curing each layer by momentary projection of the slice image is quick and provides for faster build times. On completion, the model is washed in isopropanol alcohol cleaning fluid, and supports are snipped away. After curing in UV light (sunlight), the translucent models can be left 'as printed', polished or painted as required. ARM-10 will provide a valuable resource for commercial users and higher education. In the classroom, the materials used by ARM-10 need careful handling so close supervision will be needed.

An ARM-10 provides professional 3D-print capability at a price that rivals budget machines but with model properties that are otherwise unattainable in this sector. ARM-10 is the first 3D printing device to be developed and produced by Roland DG, an established major player in the global prototyping market, and signifies an important new dimension to their product portfolio. With the Roland brand behind it, ARM-10 users can be assured of solid back-up, reliable technical advice and dependable customer support well into the future. Machines also benefit from a full Roland one year warranty.

How it works



Milling technology sits alongside 3D Printing to provide full capability for all rapid prototyping demands. The new SRM-20E and ARM-10 machines from Roland DG bring together precision Subtractive Rapid Manufacturing (SRM) and Additive Rapid Manufacturing (ARM) into a 'matched-pair' of stylish, affordable desktop machines. See page 65 for full details of the SRM-20E.



Specifications

Max Build Size:	130 x 70 x 70mm
Model Material:	imageCure™ photopolymer resin (semi transparent)
Slice Resolution:	0.1mm
Interface:	USB
Weight:	17kg
Dimensions:	430(W) x 365(D) x 450(H)mm
Warranty:	1 Year On-Site

Prices £*

*See Pricing Information on page 2

Starter Package

MP-RL-ARM10E	Roland ARM-10E Starter Package. Includes machine with resin tray and washing kit, 3 bottles imageCure resin, 5 litres isopropynol cleaning fluid and pack of 100 disposable gloves. Save £22
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Machine Only

RL-ARM10	Roland ARM-10 c/w resin tray and washing kit
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Consumables

RLP-ARM-RESIN1	350g bottle of Standard Hard Resin
RLP-ARM-RESIN2	350g bottle of Flexible Resin
RLP-ARM-RESIN3	350g bottle of Rubberlike Resin
RLP-ARM-VAT1	Replacement Resin Tray 
MMP-ISOCF1	5 litres Isopropanol Alcohol Cleaning Fluid (for cleaning parts made on the ARM-10) 
TMS-LAS-GLOVES	Pack of 100 Medium Vinyl Gloves (powder free)

Optional Extras

Parts can be cured quicker by exposure to a UV light source - a manicurist's nail drier will do the job.

Washing unused material from complex parts can be enhanced by using a suitable jewellers ultrasonic tank.

Recommended Software

SOLIDWORKS (page 18)



3D Printers Build Real Plastic Parts from 3D CAD Models

Why Do I Need One?

Students using SOLIDWORKS or any mainstream 3D CAD platform will, sooner or later, need to turn ideas into real parts for projects. 3D milling has its place, but an accurate, functional part in ABS plastic will often do the job well. uPrint SE and Mojo machines build using Fused Deposition Modelling (or FDM) by extruding a fine filament of molten ABS plastic. A second filament of support structure is also extruded.

Soluble Support Advantage

Mojo and uPrint SE Plus both use SST (Soluble Support Technology), the support material being gently removed by dissolving away. With SST (Soluble Support Technology) there is no limit to the complexity of the part you can build. For most jobs, parts will be completely functional and can be used straight from the machine. Their smooth-textured, satin finish is not unattractive and faithfully represents both the dimensional and aesthetic qualities of the CAD model.

uPrint has been developed to give designers a truly in-house means of Rapid Prototyping with no compromise on part quality. Mojo takes this class-leading technology and presents it in the most compact desktop format yet to be seen. TechSoft have been selling Stratasys FDM machines into education since 2004 so we know how accurate and reliable the process is.

Which Machine Should I Choose?

If the budget allows, the uPrint SE Plus will give schools and colleges everything they need with this professional reliable 3D printer. The Mojo offers educational users additional benefits in that the model and support material are each supplied as a complete QuickPack™ Print Engine cartridge that simply slots into the machine, meaning minimal maintenance and no calibration or set-up routing. Both machines are supplied with software to import 3D .stl files and build them. The software allows students to set a preferred build strategy and analyse the effect of these settings before committing to a build. Mojo requires a dedicated PC to operate the machine; uPrint SE Plus downloads the file and builds the model independently.

Support Removal System

uPrint SE Plus machines are supplied with the SCA-1200HDT Support Removal System. The SCA-1200HDT has a large load capacity and the Ecoworks solution remains in the tank until no longer effective. It is then manually drained and replenished - parts are hand washed in a sink.

Mojo has its own WaveWash 55 system which needs no plumbing and sits on the desktop just like a domestic kettle. All systems run quietly to dissolve away support material, they make no mess and are designed for ease of use.

Mojo 3D Package



Designed to balance price, 'footprint' and capacity, Mojo is ideal for many schools and colleges. SST technology and 0.178mm resolution means no limit to model complexity. Can be supplied with a complete package including the Wavewash 55 Support Removal System.

Specification

Max build size: 127 x 127 x 127mm
 Model Material: ABS Plus (various colours)
 Slice Resolution: 0.178mm
 Interface: USB
 Dimensions: 630(W) x 450(D) x 530(H)mm
 Weight: 27kg
 Removal System: WaveWash 55 (see page 59)

uPrint SE 3D Package



A compact machine but with sufficient build capacity for 3D printing complete student projects – not just components. Features SST technology and 0.25mm resolution - allows for complex models with good surface finish. Can be supplied as a complete package with the SCA-1200HDT Support Removal System.

Specification

Max build size: 203 x 152 x 152mm
 Model Material: ABS Plus (Ivory only)
 Slice Resolution: 0.25mm
 Interface: Ethernet
 Dimensions: 635(W) x 660(D) x 786(H)mm
 Weight: 76kg
 Removal System: SCA-1200HDT (see page 59)

uPrint SE Plus 3D Package



Compact size, price and a choice of 9 colours for models means most schools and colleges will find the uPrint SE Plus will give them everything they need. Features SST technology and the option of 0.33mm resolution for faster builds. Can be supplied as a complete package with the Wavewash or SCA-1200HDT Support Removal System.

Specification

Max build size: 203 x 203 x 152mm
 Model Material: ABS Plus (various colours)
 Slice Resolution: 0.25mm (or 0.33mm)
 Interface: Ethernet
 Weight: 76kg
 Dimensions: 635(W) x 660(D) x 786(H)mm
 Removal System: SCA-1200HDT (see page 59)

Workstation for Mojo

This workstation provides complete 'plug-and-play' convenience for 3D Printing. Features integral wiring and sockets. The lockable doors reveal ample storage below for consumables. Mounted on heavy-duty lockable castors, the workstation can be easily moved to where needed and it is powered by a single 13A socket.



Specification

Dimensions: 1400(W) x 800(D) x 850(H)mm
Weight: 180kg

Stand/Cupboard for uPrint SE

The perfect complement for a uPrint SE 3D Printer, this robust workstation provides a smart way to present the machine at the right working height and to store all the tools and materials that come with it. Features capacious storage, sturdy drawers and a lockable door.



Specification

Dimensions: 700(W) x 800(D) x 850(H)mm
Weight: 76kg

Prices £*

*See Pricing Information on page 2

Mojo

Each Mojo 3D printer is supplied with Print Wizard software and start-up supplies (328cc model material, 131cc support material, 2 bases). There is a one year return to base warranty.

MP-MJ3DR1-COMSO	Mojo with WaveWash 55 Removal System
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uPrint SE

Each uPrint SE 3D printer is supplied with Catalyst software and start-up supplies (1 model spool, 1 support spool, 6 bases). There is a one year return to base warranty.

MP-USE-COMSO	uPrint SE 3D Printer Only
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MP-USER2-COMSO	uPrint SE 3D Printer with SCA-1200HDT Removal System.
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uPrint SE Plus

Each uPrint SE Plus 3D printer is supplied with GrabCAD software, start-up supplies (1 model spool, 1 support spool, 6 bases) and commissioning and training on the same day. There is a one year on-site warranty.

MP-USEPG	uPrint SE Plus 3D Printer Only
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MP-USEPR2G	uPrint SE Plus 3D Printer with SCA-1200HDT Removal System.
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Recommended Extras

TF-WS3-C2	TechSoft Mobile Workstation for Mojo 1400x800x850mm
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TF-WS4-C1	Wheeled Stand/Cupboard 700x800x850mm for uPrint SE or uPrint SE Plus
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Accessories and Materials

For our full range of accessories and materials see page 62.

Recommended Software

SOLIDWORKS (page 18)

Support Removal System for Mojo/uPrint

Wavewash 55 Support Removal System

Designed to partner the Mojo 3D Printer, Wavewash 55 is a compact unit that does not need plumbing to mains water or drainage. It will accept the largest models Mojo will produce. The 3.78 litre tank needs a single Ecoworks tablet to make an active solution. Once filled and activated, Wavewash 55 manages the cleaning process automatically. Filling, draining and final part washing is done manually so siting near to a sink will be beneficial.



Tank Capacity: 3.78 litres
Weight: 5kg
Dimensions: 335(W) x 335(D) x 335(H)mm

Exclusively for the Mojo 3D Printer

TM-DIM-CS9	Wavewash 55 Support Removal System (Free Standing – Maximum model size 127 x 127 x 127mm)
TMP-MJ-SRPK	Pack of 24 Ecoworks Tablets (use one tablet with every 3.78 litres of water)
TMP-MJ-RB	Wavewash 55 Replacement Bushing

SCA-1200HDT Support Removal System

This free standing unit requires no plumbing but needs to be sited near a sink for manual filling, draining and final part washing. The SCA-1200HDT has sufficient capacity to accommodate the largest models from uPrint SE Plus.



Tank Capacity: 46.3 litres
Weight: 29kg
Dimensions: 445(W) x 660(D) x 520(H)mm

TM-DIM-CS10	SCA 1200HDT Removal System (Free Standing – Maximum model size 250 x 250 x 300mm)
TMP-DIM-SRPK	Ecoworks Cleaning Agent (24 sachets, use 1 sachet for every 7.5 litres of water)
TMP-UPR-SOLCON	P400-SC Soluble Concentrate

Wavewash Support Removal System

Discontinued, but Consumables still available.



TMP-DIM-SRPK	Ecoworks Cleaning Agent (24 sachets, use 1 sachet for every 7.5 litres of water)
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Robox Materials

SmartReel PETG Materials (Recommended)

PETG is a premium filament that produces high-strength, high-quality parts with great thermal stability and adhesion, avoiding the moisture absorption problems common with PLA. This material is Bipheryl A free, RoHS certified, REACH compliant and FDA-approved foodsafe. PETG is the recommended general purpose material for your Robox 3D printer.



TMP-RBXMFF-COL*	Robox Reel of 1.75mm PETG Filament (0.7kg, 240m). Available in Black, Bronze, Light Blue, Light Green, Orange, Red, Silver or White.	
TMP-RBXMFT-COL*	Robox Half Reel of 1.75mm Transparent PETG Filament (0.35kg, 120m). Available in Black, Blue, Green, Red or Yellow.	
TMP-RBXMFL-COL*	Robox Half Reel of 1.75mm Fluorescent PETG Filament (0.35kg, 120m). Available in Clear, Orange or Yellow.	

SmartReel PLA Materials

An extensive choice of materials is available in the PLA SmartReel range. Choose between 11 different colours including clear.



TMP-RBXMPC-COL*	Robox Reel of PLA Filament.	
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SmartReel Special Materials

Woody Beech PLA contains no wood but imitates natural wood perfectly. The material is 35-40% lighter than ordinary PLA and is perfect for printing any number of 'wooden' structures from dolls houses to garden ornaments, chess sets, pen pots, etc.

ThermoChrome PLA filament prints just like normal PLA but has an additive which enables a colour-changing feature. When the material is cold it is dark grey, but as it warms it changes colour to light grey – perfect when printing wearable items such as necklaces and wrist straps, bath thermometers, children's toys, etc.

TMP-RBXMSSH-WB	Robox Half Reel of 7.75mm Woody Beech PLA Filament (0.35kg, 120m).	
TMP-RBXMST-TC2	Robox Reel of ThermoChrome.	

SmartReel ABS Materials

This material is an industrial-grade ABS-type material, uniquely modified for 3D printing. With excellent mechanical properties, very little warping, above average impact resistance and excellent thermal stability it is a very easy to print material. ABS is an ideal material for engineering parts and prototypes where remarkable accuracy and detail are key.



TMP-RBXMFA-COL*	Robox Reel of 1.75mm ABS Filament (0.7kg, 240m). Available in Black, Dark Blue, Grey, Green, Natural, Orange, Red, Silver or White.	
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SmartReel Nylon Materials

Nylon is a stronger and more durable alternative to ABS and PLA. With very high inter-layer adhesion, nylon lends itself well to things like living hinges and other flexible parts. Its high melting temperature and low friction coefficient make Nylon an excellent choice for working prototypes and end use parts. Nylon parts typically don't scratch or break and you will obtain a smooth surface finish straight from the printer.

TMP-RBXMN-NT	Robox Half Reel of 1.75mm Nylon Natural Filament (0.35kg, 120m).	
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SmartReel Flexible Materials

This highly flexible (and virtually unbreakable) material prints with minimal effort on any RoboxDual or RoboxPro. This opens up endless new possibilities for 3D printed projects, such as clothing, shoes, wearables and prosthetics. N.B. Loading is made easier using a short piece of Bowden tube fitted into the feed tube.

TMP-RBXMFX-COL*	Robox Half Reel of 1.75mm Flexible Filament (0.35kg, 120m). Available in black or white.	
TMP-RBX-BT1	Short Section of Bowden Tube (can be used to help with loading flexible filament into any Robox 3D Printer)	

SmartReel HIPS Materials

HIPS is an impact-resistant plastic which can be used as a support material. It dissolves in Limonene which is produced from a renewable source (citrus oil, as a byproduct of orange juice manufacture). HIPS would normally be used with the dual material kit for soluble support removal.



TMP-RBXMS-NH	Robox Reel of Natural HIPS.	
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Breakaway Support Materials

This material is specifically designed as a support material used for Dual Material printing. It de-laminates easily yet is capable of layering well during a print, making it perfect as a support structure for a range of materials.

TMP-RBXMSSH-SUP	Robox Half Reel of Breakaway Support Filament (0.35kg, 120m).	
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Water-Soluble Support Material

PVOH filament was designed specifically for use with dual material printing with ABS or flexible (TPU) materials. Dissolvable in lukewarm water, using this filament is an easy way to create models and prototypes with overhang, without having to break away the support material or use solvents to remove it once printed.

TMP-RBXMSSH-SOL	Robox Half Reel of 1.75mm PVOH Water-Soluble Support Filament (0.35kg, 120m)	
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Robox Accessories

Upgrade to Dual Material Head

TMP-RBX-DMKFC	Dual Material Kit for Robox. Machine must be returned to manufacturer by customer.	
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General Accessories

TMP-RBX-REEL1	Empty Robox Smart Reel with blank EEPROM	
TMP-RBX-TWZ1	Tweezers for Robox	
TMP-RBX-AW10	Pack of 10 Alcohol Wipes for Robox	
TMP-RBX-LUB1	7ml Bottle of Lubricant for Robox	
TMP-RBX-TWB1	Silicon Tip Wipe Blade for build plate of Robox	

Spare Parts

TMP-RBX-MH1	Replacement Single Material Dual Nozzle Head for Robox	
TMP-RBX-MH2	Replacement Dual Material Head	
TMP-RBX-MH3	SingleX Experimental Head for Robox	
TMP-RBX-EXT1	Replacement Extruder for Robox	
TMP-RBX-BED1	Replacement Standard ThermoSurface Bed Sheet for Robox	
TMP-RBX-BED2	Alternative LokBuild Bed Sheet for Robox	
TMA-EXT3D-RBX1F	Replacement HEPA Filter for Robox Extractor for RoboxPRO	

Wireless Control

TMP-RBX-MT1	Robox Mote Touchscreen Control Interface and Network Access Point for Robox	
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*When ordering, where COL is included in the order code, please change this to specify the actual colour(s) required.

Ultimaker Materials

PLA Filament

TMP-UMMP-COL*	750g Reel of PLA Filament. Available in Black, Blue, Green, Magenta, Orange, Pearl White, Red, Silver/Metallic, Transparent, White & Yellow.	
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Tough PLA Filament

TMP-UMMPT-COL*	750g Reel of PLA Filament. Available in Black, Green, Red & White.	
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ABS Filament

TMP-UMMA-COL*	750g Reel of ABS Filament. Available in Black, Blue, Green, Grey, Orange, Pearl Gold, Red, Silver, White & Yellow.	
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CPE (PET) Filament

TMP-UMMC-COL*	750g Reel of CPE (PET) Filament. Available in Black, Blue, Green, Light Grey, Dark Grey, Red, Transparent, White & Yellow.	
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Polycarbonate Filament

TMP-UMMB-COL*	750g Reel of Polycarbonate Filament. Available in Black, White & Transparent.	
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CPE-TR Filament

TMP-UMMCT-COL*	750g Reel of CPE-TR Filament. Available in Black, White & Transparent.	
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Nylon Filament

TMP-UMMN-COL*	750g Reel of Nylon Filament. Available in Black or Transparent.	
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TPU (Flex) Filament

TMP-UMMF-COL*	750g Reel of TPU (Flex) Filament. Available in Black, Blue, Red, White.	
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Tough PLA Filament

TMP-UMMPT-COL*	Ultimaker 750g Reel of PLA Filament. Available in Black, Green, Red and White.	
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Support Filament

TMP-UMMS-V1	350g Reel of PVA Natural Support Filament	
TMP-UMMS-V2	750g Reel of PVA Natural Support Filament	
TMP-UMMS-B1	750g Reel of Breakaway Support Filament	

Cleaning Filament

TMP-UMMCF1	Cleaning Filament	
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MakerBot Sketch Materials Accessories

PLA Filament

TMP-MBSP-COL*	MakerBot PLA Filament. Available in Black, Blue, Green, Grey, Orange, Red, White & Yellow.	
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Tough Filament

TMP-MBST-COL*	Tough Filament. Available in Black, Grey, Orange & White.	
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Build Plates

TMP-MBS-BP-2	Pack of 2 Build Plates	
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Extruders

TMP-MBS-EXT-2	Pack of 2 Extruders	
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Particulate Filter

TMP-MBS-PF1	Particulate Filter	
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MakerBot Replicator + & Z18 Materials

Standard PLA Filament

TMP-MBP2-COL*	MakerBot PLA Opaque Filament Small Reel (0.2kg). Available in Black, Blue, Brown Cool Grey, Green, Orange, Red, Warm Grey, White, Yellow.	
TMP-MBP-COL*	MakerBot PLA Opaque Filament Large Reel (0.9kg). Available in Black, Blue, Brown Cool Grey, Green, Orange, Red, Purple, Warm Grey, White, Yellow.	
TMP-MBPX-COL*	MakerBot Opaque PLA Filament Extra Large Reel (for Z18 only). Available in Black, White, Grey.	

Translucent PLA Filament

TMP-MBP2-TNT	MakerBot PLA Translucent Filament Small Reel (0.2kg). Natural.	
TMP-MBP-TNT	MakerBot PLA Translucent Filament Large Reel (0.9kg). Natural.	
TMP-MBP2-TCOL*	MakerBot PLA Translucent Filament Small Reel (0.2kg). Available in Blue, Orange or Yellow.	

Speciality PLA Filament

TMP-MBS2-COL*	MakerBot Speciality PLA Filament Small Reel (0.2kg). Available in Khaki or Peach.	
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Tough PLA Filaments

TMP-MBT-COL*	MakerBot Tough Filament. Available in Black, Grey, Orange & White.	
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MakerBot Replicator + & Z18 Accessories

For Replicator+

TMP-MB-PLATE3	Replicator Build Plate	
TMP-MB-TAPE5	Pk of 10 Replicator Build Plate Tape	
TMP-MB-GREASE1	3 Grease Packets	
TMP-MB-EXT3	Smart Extruder+ for Replicator, Replicator+, Replicator Mini, Replicator Mini+	
TMP-MB-EXT4	Tough Filament Smart Extruder+ for Replicator+, Replicator Mini+.	

For Replicator Z18

TMP-MB-PLATE7	Pk of 3 Replicator Z18 Build Plate	
TMP-MB-TAPE1	Pk of 4 Replicator Z18 Build Plate Tape	
TMP-MB-GREASE1	3 Grease Packets	
TMP-MB-EXT2	Smart Extruder+ for Replicator Z18	
TMP-MB-EXT5	Tough Filament Smart Extruder+ for Replicator Z18.	

*When ordering, where COL is included in the order code, please change this to specify the actual colour(s) required.

Makerbot Method / Method X Materials

Materials for Method / Method X:

TMP-MBMG-COL	MakerBot PETG Filament. Available in Black, Natural & Red.	
TMP-MBMP-COL	MakerBot PLA Filament. Available in Black, Grey, Natural, Orange, Red and White.	
TMP-MBMT-COL	MakerBot Tough Filament. Available in Black, Grey, Orange and White.	
TMP-MBMN-BK	Nylon Filament. Available in Black.	

Materials for Method X:

TMP-MBMXA-COL	MakerBot ABS Filament. Available in Black, Grey, Natural, Orange, Red and White.	
TMP-MBMXS-COL	MakerBot ASA Filament. Available in Black, Red and White.	

Makerbot Method / Method X Accessories

Accessories for Method:

TM-MBMX-S	Performance Base Station	
TMP-MBM-BASE1	Performance Grip Surface. Pack of 3.	
TMP-MBM-BASE2	Spring Steel Build Plate	
TMP-MBM-EXT1	Model 1 Performance Extruder	
TMP-MBM-EXT2	Support 2 Performance Extruder	
TMP-MBM-KIT1	Accessory Toolkit	

Accessories for Method X:

TM-MBMX-S	Performance Base Station	
TMP-MBM-BASE1	Performance Grip Surface. Pack of 3.	
TMP-MBMX-EXT1	Standalone Extruder ABS	
TMP-MBMX-EXT2	Standalone Extruder SR30 Support	

Model Material for Mojo/uPrint

Spools and cassettes are not interchangeable so it is essential to select the right material for your machine. Material is supplied in sealed bags. ABS will absorb moisture from the atmosphere so always re-seal bags if part-used spools are to be stored. It is worth noting the quantity of material being ordered and the cost. Catalyst software predicts the amount of material needed so this figure can be used to determine individual part costs.



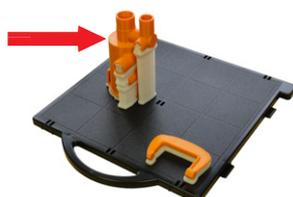
For Mojo

TMP-MJM-COL	Mojo Quick Pack Model Print Engine (1311cc) (Available in Ivory, Nectarine, Red, Yellow, Olive Green, Blue, White, Steel Grey or Black)	
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For uPrint SE

TMP-USEPM-IV	Ivory Model Spool (688cc) for uPrint SE & uPrint SE Plus	
TMP-USEPM-IV5	Pack of 5 Ivory Model Spools (688cc each) for uPrint SE & uPrint SE Plus	

Model Material



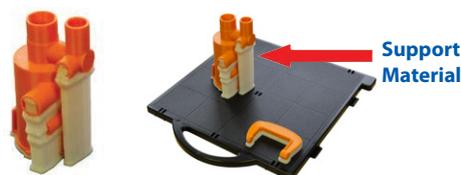
For uPrint SE Plus Available in Ivory, Nectarine, Red, Yellow, Olive Green, Blue, White, Dark Grey or Black.

TMP-USEPM-COL*	Coloured Model Spool (688cc) for uPrint SE Plus	
TMP-USEPM-COLS*	Pack of 5 Coloured Model Spools (688cc each) for uPrint SE Plus. All same colour.	

For uPrint (purchased before 2011)

TMP-UPR-AP	Ivory Model Spool (491cc) for uPrint	
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Support Material for Stratasys FDM 3D Printers



Spools and cassettes are not interchangeable, BST support must not be used in SST machines and vice versa, so carefully check your machine model when ordering. Most parts will use less support material than model material, but the proportion will vary depending on the model and the chosen build-strategy. One support spool for every three/four model spools should be about right.

For Mojo

TMP-MJM-SUP	Mojo Quick Pack Support Print Engine (1311cc)	
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For uPrint SE and uPrint SE Plus

TMP-USEM-SUP	Support Spool (688cc) for uPrint SE and uPrint SE Plus	
TMP-USEM-SUP5	Pack of 5 Support Spools (688cc each) for uPrint SE and uPrint SE Plus	Base

For uPrint (purchased before 2011)

TMP-UPR-SUP	Support Spool (491cc) for uPrint	
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Model Bases for Stratasys FDM 3D Printers



For Mojo

TMP-MJ-BASE	24 Plastic Bases for Mojo (127 x 127mm)	
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For uPrint SE and uPrint

TMP-UPR-BASE24	24 Plastic Bases for uPrint or uPrint SE (203 x 152mm)	
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For uPrint SE Plus

TMP-UPRP-BASE24	24 Plastic Bases for uPrint SE Plus (203 x 203mm)	
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N.B Opened packages cannot be refunded so please order carefully. If in doubt specify the machine serial number when ordering

3Doodler Create



Is it a 3D Printer or is it a Modelling Tool?

It is both of these things but 3Doodler is certainly not a toy - although it is great fun to use! 3Doodler works in the same way as FDM 3D Printers by feeding a plastic filament into a heated liquefier head and extruding this as a very fine filament of sticky molten material. This fine filament is then extruded onto a base, or onto itself, so that you can quickly build up layers to create 3D models. Provided the filament is laid down while still hot, the layers will fuse into a solid plastic model. The shape, strength and solidity of the model is controlled entirely by the user – the more densely you lay down the filament, the more solid (and strong) will be the model. It really is that simple – but 3Doodler is clever too. 3Doodler is an ingenious hand-held device that not only feeds, melts and extrudes the filament but finely controls the process too. By selecting the material to be used from the LCD display, you will be selecting extrusion speed and temperature. This allows a wide variety of thermo-plastic materials to be used and provides the optimum conditions for the type of modelling you want to do.

Where can I use 3Doodler?

3Doodler is great for free-form modelling plastic parts – even for spacial models ‘in the air’. Models can be entirely expressive forms or be functional parts for projects. Because 3Doodler uses the same materials as 3D Printers, it can even be used for repairing, beefing-up or modifying 3D printed parts without the need to edit a CAD file and run the job again.

Is 3Doodler Safe for Kids?

Materials such as PLA, ABS and FLEXY are commonly used in children’s toys and food packaging and, therefore, completely safe. The extrusion tip will be hot but careful attention to ergonomics makes it easy and natural to keep hands and fingers away. The extruded filament is hot but only for a very short time – normal supervision and instruction will be sufficient to ensure teachers can confidently allow 3Doodler to be used in their classroom.

What Materials does 3Doodler Use?

Because 3Doodler closely controls temperature and feedrate, a wide variety of materials can be used. These include:

- ABS – for strong models in range of colours
- PLA – a general purpose material for lower-cost models in a range of colours
- FLEXY - for creating moving joint/parts with maximum stretch

In addition, specially ‘filled’ grades of filament will give the appearance of wood, stone or brick. Thermo-chromic, luminous and flexible filaments are also available. 3Doodler is supplied with a range of sample materials to help you get started.

Prices £*		*See Pricing Information on page 2
AR-3DP2-PK1	3Doodler Create+ Full Education Bundle. <i>Includes 12 3Doodler Create+ Pens, 12 DoodlePads, 4 Nozzle Sets, 12 Adapters, 1200 Filament Strands (500 ABS, 500 PLA, 200 Flexy), Teacher’s Kit (inc. JetPack, Checklist, Welcome Sheets, Cheatsheet, Poster, Activity Guide, Troubleshooting Guide, Create+ Manual, EDU Booklet, 2 Lesson Plans, 2 Nozzle Removal Tools, 2 Mini Screwdrivers, 2 Unblocking Tools).</i>	
AR-3DP2-PK2	3Doodler Create+ Half Education Bundle. <i>Includes 6 3Doodler Create+ Pens, 6 DoodlePads, 2 Nozzle Sets, 6 Adapters, 600 Filament Strands (200 ABS, 200 PLA, 200 Flexy), Teacher’s Kit (contains JetPack, Checklist, Welcome Sheet, Cheatsheet, Poster, Activity Guide, Troubleshooting Guide, Create+ Manual, EDU Booklet, 2 Lesson Plans, 2 Nozzle Removal Tools, 2 Mini Screwdrivers, 2 Unblocking Tools).</i>	
AR-3DP2-TE1	3Doodler Create+ Teacher Experience Sample Pack. <i>Includes 3Doodler Create+ Pen, 50 Create Plastic strands, Adapter, Unblocking Tool, Nozzle Removal Tool, Mini Screwdriver, Coupon, Sample Checklist, Samples Cheatsheet, Sample Lesson Plan, Sample Activity Guide, EDU booklet, Troubleshooting Guide, Create+ Manual. N.B. Limited to One Per Classroom.</i>	
AR-3DP2-RF1	3Doodler Create+ Learning Pack Refill. <i>Contains 1200 filament strands (500 ABS, 500 PLA, 200 Flexy).</i>	

3Doodler Start



The 3Doodler Start Pen and Eco-Plastics are specially designed to be completely safe for kids aged 8 years and above. There are no hot parts on the pen and our Eco-Plastic is made from food-safe materials, is non-toxic, BPA-free, and completely biodegradable in your household compost. The pen nozzle and plastic can safely be touched with no burn risks. No mess, eco-friendly plastics. Allows children to literally draw in the air with only one speed and one temperature.

Prices £*		*See Pricing Information on page 2
AR-3DP3-PK1	3Doodler Start Full Education Bundle. <i>Includes 12 3Doodler Start Pens, 12 DoodlePads, 24 DoodleBlocks, 12 USB cables, 1200 Start Plastic Strands (150 of each colour), Teachers Kit (including Checklist, Welcome Sheet, Cheatsheet, Poster, Activity Guide, DoodleBlock Guide, Troubleshooting Guide, Start Manual, EDU Booklet, 2 Lesson Plans, 2 Unblocking Tools).</i>	
AR-3DP3-PK2	3Doodler Start Half Education Bundle. <i>Includes 6 3Doodler Start Pens, 6 DoodlePads, 12 DoodleBlocks, 6 USB cables, 600 Start Plastic Strands (75 of each colour), Teacher’s Kit (including Check Checklist, Welcome Sheet, Cheatsheet, Poster, Activity Guide, DoodleBlock Guide, DoodleBlock Guide, Troubleshooting Guide, Start Manual, EDU Booklet, 2 Lesson Plans, 2 Unblocking Tools).</i>	