

The background is a deep blue gradient with a grid of lighter blue squares that recede into the distance, creating a 3D effect. In the foreground, there are several thick, curved, white and light blue lines that sweep across the bottom right corner. The overall aesthetic is clean, modern, and tech-oriented.

TECHSOFT

www.techsoft.co.uk

Product Guide
30th Edition

Product Showcase

2D
DESIGN

V2



2D CAD/CAM

See pages 6-9, 12-50, 64-129

3D

SOLIDWORKS



3D CAD/CAM

See pages 6-9, 18-21, 51-91

Techsoft
extiles

TECHSOFT
TEXTILES



Textiles

See pages 100-117



Enterprise Packs

See pages 221-226

Product Showcase



E Textiles



Electronics

See pages 14-15, 92-99, 114-115



Furniture

See pages 205-220



Studio & Workshop Equipment

See pages 132-204



Installation Services

See pages 10-11



**TechSoft UK Limited,
Falcon House, Royal Welch Avenue, Bodelwyddan, Denbighshire, LL18 5TQ.**

**Tel: 01745 535007 Fax: 01745 535008
Email: sales@techsoft.co.uk Website: www.techsoft.co.uk**

Introduction

TechSoft UK Ltd was founded in the mid 1980s and soon established itself as the market leading supplier of CAD and CAD/CAM systems (Computer Aided Design and Computer Aided Manufacture) to schools, colleges and universities in the UK. Due to customer demand, our Project Management Service was launched in 2007 and since then we have undertaken many successful new-build and re-furbishment projects.

This Product Guide contains not only all our CAD/CAM products, but also manual machine tools, textiles equipment, art equipment (including pottery) and furniture. Our aim, as always, is to provide the right products at the right price, and with the highest levels of support in the industry.

Pricing Information

Prices shown are accurate selling prices at the time of this Product Guide going to print (May 2018). However, manufacturers' costs, shipping charges and exchange rates will vary, and while we will always endeavour to absorb such variations, we may occasionally need to reflect changes beyond our control in our selling prices. We hope that the prices shown will help budget-planning while browsing this Product Guide.

Current prices can always be found on our website or by telephoning.

All prices shown are in £ sterling and are exclusive of VAT

Ordering

SOFTWARE: To avoid delays, please ensure all details are provided.

CARRIAGE: N.B. Carriage charges are for delivery only and do not include positioning or installation of goods.

UK Mainland	£	All goods totalling up to 100g, eg, single cutter.
	£	All goods totalling up to 2kg, eg., software, multiple cutters, pens.
	£	All goods totalling up to 20kg, eg., Stika, Robox, small embroidery machines, materials and consumables.
	£	All goods totalling up to 40kg, eg., CAMM 1, SRM-20E, heavy materials.
	£	Single pallet charge - for goods up to 500kg and less than 1200(W) x 1000(D) x 2000(H)mm eg., RotoCAMM MDX-40AE, large/heavy materials.
	£	Double pallet charge - for goods totalling up to 500kg and less than 2000(W) x 1200(D) x 2000(H)mm eg., LaserCAMs, Modela Pro II MDX-540E, TechSoft workstations.
	£	Extra large goods up to 500kg which cannot be delivered by pallet, eg., VersaCAMM, RouterCAM, PlasmaCUT, large furniture. (Priced per item - please ask for quotation if ordering in quantity.)
	£	Extra heavy goods over 500kg which cannot be delivered by pallet, eg., manual milling machines, manual lathes. (Priced per item - please ask for quotation if ordering in quantity.)
Elsewhere		Carriage charges vary, please contact TechSoft.

POSITIONING & INSTALLATION: Charges vary according to the goods purchased & accessibility to site. Please ask for a quotation.

Payment

Official educational orders welcome, otherwise cheque with order please, payable to TechSoft UK Ltd.

UK customers add VAT to total. (Vat Registration No: 456 9118 23).

Mastercard, Visa, Access, Switch, Maestro and Delta card payments also accepted.


All sales are subject to our standard terms of trading - see inside back cover.


N.B. All pictures, colours, attachments and dimensions are illustrative and liable to manufacturer's changes that are beyond our control.


Contents


An Introduction to CAD/CAM	5
About TechSoft	5
CAD/CAM Overview, Systems and Packages	6

Project Management Services	10
Design and Planning	10
Training and Support	11


CAD/CAM Software	12
	
2D Design	12
2D PCB	14
2D Primary	16
SOLIDWORKS	18
Visual Toolpath	21
PhotoVCarve	22
VCarve	22


Laser Cutting / Engraving	23
	
Lasers Buying Guide	23
LaserCAM Machines	24
Consumables	26
Materials	27

Plasma Cutting	30
	
PlasmaCUT Machines	30


Knife Cutting	32
	
Comparison Chart	32
Stika	33
CAMM 1	34
VersaSTUDIO	36
TrueVIS	38
Materials	40

Wire Bending	50
DiWire Bender	50

3D Printing	51
	
About 3D Printing	51
Comparison Chart	52
Robox 3D Printer	53
Witbox 2 3D Printer	54
Ultimaker 3D Printer	55
Makerbot 3D Printer	56
Roland ARM-10	57
Stratasys Mojo & uPrint 3D Printers	58
3D Printing Materials	60
3D Pens	63

Milling / Routing / Engraving	64
	
Comparison Chart	64
Roland SRM-20E	65
RotoCAMM MDX-40AE	66
Roland EGX-350E	68
Modela MDX-50E	69
Modela Pro II MDX-540E	70
RouterCAM	72
Sieg CNC Millers	74
Boxford CNC Millers	76
Tools	79
Materials	87

CNC Lathe	75
Sieg CNC Lathe	75
Boxford CNC Lathe	77
Boxford Combination Machines	78

Electronic Control & Coding	92
	
2D PCB	14
Locktronics	92
BBC micro:bit	93
Raspberry Pi	96
PCB Manufacture	97
E Textiles	108

Contents

Textiles 100



DesignaKnit Software	101
Silver Reed Knitting Machines	101
PE Design Software	102
Computerised Embroidery Machines	104
Computerised Sewing & Embroidery Machines ..	106
Sewing Machines	108
Overlocker	109
Threads, Stabilisers & Interfacings	110
General Textiles Equipment	113
E-Textiles	114
Clothing	116

Image Transfer 118



Laser Image Transfer	118
Sublimation	120
Heat Presses	122
Materials	124
Metaza MPX-90	129

Fine Silver Jewellery 130

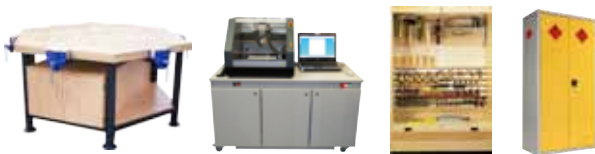


Precious Metal Clay	130
---------------------------	-----

Art / Ceramics 132

Art & Design	132
Pottery Equipment	134

Furniture 205



CAD/CAM Workstations	205
Machine Workstations / Stands	207
Workbenches and Side Benching	208
Tables, Desks & Seating	212
Cantilever Workstations and Trunking	214
Computer Workstations	215
Storage	216

Workshop Manual Machines 141



Morticers	141
Bandsaws	142
Circular Saws	144
Planer Thicknessers	146
Combination Woodworking Machines	148
Vertical Panel Saw	150
Mitre Saws and Fretsaws	151
Vacuum Presses	154
Wood Lathes and Turning Tools	156
Drills	158
Tool Sharpeners	161
Grinders	162
Bandfacers	163
Polishers	164
Metal Bandsaws and Cut-Off Saws	165
Metal Lathes	167
Metal Mills	168
Metal Working Machines	169
Low Temperature Casting System	171
Heat Treatment	172
Thermoforming Equipment	176
Consumables for Workshop Machines	184
Extraction Systems	186

Hand Tools 192

Hand Tools	192
Power Tools	202

Enterprise Packs 221

Enterprise Packs	221
------------------------	-----

Teaching Resources 227



Design & Technology eLearning	227
CAD/CAM Training Packs	228
CAD/CAM Projects	229

Servicing, Training & Maintenance 230

Servicing and Maintenance	230
Training Course Booklets	231
Bespoke Training Courses	231
CAD/CAM Training Courses	232

Index & Terms 233

Terms of Trading	233
Index	234

Our Sales and Support Team

TechSoft's sales and support team spends pretty much every day in schools, colleges or universities, working with teachers in every part of the country to provide training, inspiration and advice about CAD/CAM systems and how best to incorporate them into the Design and Technology curriculum. TechSoft are corporate members of DATA and, as the leading CAD/CAM supplier for UK education, we make it our business to keep up to date with the latest thinking and developments in the subject. Our regionally based personnel have many years of classroom teaching experience between them, and have led workshop re-development programmes in their former roles. They all remain passionate about Design and Technology education in its widest sense.

Leaders in CAD/CAM

TechSoft's flagship CAD software 2D Design, is now the principal design software in over 7000 schools and colleges and we are main education distributors for SolidWorks - the industry leading 3D design software. We offer the most comprehensive range of CAM systems available (many of which are exclusive to TechSoft) and all are selected and supported to give years of reliable service. But we don't just know about our products, we use them too. Whenever we talk to teacher groups, deliver training, or exhibit at shows, we show-off the huge range of projects that we have created ourselves. All use TechSoft resources, all have curriculum relevance and all demonstrate the 'art of the possible' for students.

Complete Solutions for Practical Workspaces

CAD/CAM resources are, of course, only part of the picture when designing and equipping complete classroom layouts, and projects typically involve all areas of the practical curriculum. Our product range includes specialist furniture as well as manual machinery and equipment to meet all likely needs for Design and Technology, Electronics and Control, Textiles, and Art (including Ceramics).

Project Management Services

Launched in 2007, our Project Management Service now has an impressive portfolio of successful projects and satisfied customers. TechSoft has exactly the right blend of experience, vision and skill to create stimulating and safe working environments for students and efficient, well resourced, facilities for teachers.

Our understanding and experience means we can advise on all the elements of an efficient and inspiring work-space. TechSoft handle all aspects of the installation from preliminary meetings through to drawings, delivery schedules and staff training. Our installation team has a wealth of experience with high-level commercial and domestic installation work. This means we can advise on appropriate M&E provision at the earliest stages and complete installation work to a high standard that meets all regulatory requirements.

Pre-Purchase Advice

Whether you're planning a one-off software or equipment purchase, or a complete re-fit, why not talk about your options with one of our highly experienced personnel? Our core belief that 'getting it right for teachers' means person-to-person contact and an on-going commitment to provide advice, technical support and training long after the project (or product) is delivered.

"All our sales and support staff are either ex Design and Technology teachers, graduates in Design and related fields or qualified engineers. This means that not only do we have a wealth of practical understanding; we understand the subject specific issues teacher's face on a daily basis."



Sue Brown
Director
01745 535007
07977 453237
sue.brown@techsoft.co.uk



Stephen Brown
Director
01745 535007
stephen.brown@techsoft.co.uk



Sam Flippance
Sales & Support Manager
(Southern Area)
07989 947016
sam.flippance@techsoft.co.uk



Stephen Massey
Sales & Support Manager
(Midlands Area)
07813 094922
stephen.massey@techsoft.co.uk



Alasdair Jones
Installations Manager
CAD/CAM Engineer
01745 535007
07525 813439
alsadair.jones@techsoft.co.uk



Nick Davies
Sales & Technical Support
01745 535007
nick.davies@techsoft.co.uk



Elisha Hargreaves
Sales & Technical Support
01745 535007
elisha.hargreaves@techsoft.co.uk



Linda Lovatt
Office Manager
01745 535007
linda.lovatt@techsoft.co.uk



Sam Venables
Textiles Showroom Manager
01745 535007
sam.venables@techsoft.co.uk

An introduction to CAD/CAM

CAD/CAM Overview

Why CAD/CAM?

Computer Aided Design and Computer Aided Manufacture is the way things are made these days. Without this technology we wouldn't have the range and quality of products available or, at least, they wouldn't be available at a price most of us can afford. Hand-building and manual techniques still very much have their place and Design Education needs to treasure and foster these skills so that future generations will have the 'hands-on' skills to understand the man-made world and provide the next generation of engineers, designers and technicians. All of these professionals will be using CAD/CAM techniques or CAD/CAM products in their work, alongside practical hands-on skill. Design and Technology education has to reflect modern practice so it is crucial that students have the opportunity to use real CAD/CAM tools in their designing and making.



What is CAD/CAM?

Sketching is still an essential tool for exploring ideas but CAD has long since replaced the drawing board and pencil for design detailing and proposal. Although CAD images are referred to as 'Drawings', a CAD file contains mathematical data that defines shape and geometry. In early systems, this numerical data could be coded to control a machine – hence CNC; Computer Numerical Control. Modern CAD/CAM systems do the coding automatically so 'what you draw – is what you get'. When you output a file (a drawing) to the machine there is just a simple dialogue to let the machine know what you want it to do and what settings it should use.

The TechSoft Advantage

In many cases, TechSoft's 2D Design software outputs directly to machines, so this has huge advantages for teaching. Simple 2D drawing can start with the youngest pupils and be developed as they move up the school regardless of which material area they may be working in. TechSoft's 2D Primary software can let this start even earlier. Drawings could be for simple milled-shapes, iron-on logos, laser-cut badges or superb presentation sheets. Whatever the desired outcome, the start will always be with an increasingly familiar software tool. Because we write the software and work closely with machine manufacturers, we make sure that output is easy from 2D Design and, where possible, direct from the desktop with a common output dialog box. This is far more than simple 'compatibility'.

2D or 3D Software?



2D CAD is still an important tool for commercial designers. Graphic design will always be a 2D activity and any project using a laser or knife-cutting CNC machine will need 2D data to work from. 2D shapes are always quick to machine - important in a classroom situation. The parts may be assembled into 3D products reflecting the commercial practice of flat pack assembly.

There is, however, no doubt that 3D CAD is increasingly the norm for commercial designers and it is important that students have access to a good 3D modelling system as well. After much searching and trialling, TechSoft were delighted to be appointed UK Education re-sellers for SolidWorks – world leading 3D CAD. SolidWorks has excellent support letting students quickly get up to speed and onto the important thing which is using it to design better products.

For education, TechSoft's 2D Design V2 and SolidWorks sit very well alongside each other and share much common ground. 2D sketches can be imported into SolidWorks for 3D 'treatment', and elevations created in SolidWorks can be imported into 2D Design for profiling on a CAM system. Many schools introduce students to 2D Design at KS3, SolidWorks at KS4, and then use both 2D and 3D CAD as appropriate to project work right through to A-Level.

CAD/CAM in Education

Primary Schools

2D Primary software gives pupils a great new tool for doing a new type of drawing. If you back the software with a Roland Stika, then you'll have all you need



to create accurate technical drawings, design eye-popping textures and patterns, cut stickers from self-adhesive vinyl or even print and cut bespoke stickers and labels. Add the Robox 3D Printer or SRM-20 milling machine, and Primary pupils will be 3D printing and machining solid parts for real projects. It's proper CAD/CAM, a great teaching tool and exciting stuff for the pupils.



Stika SV-8E
A good starting point for those on a low budget (See page 33)

Robox
A low cost 3D Printer (See page 53)



Secondary Schools

Getting the right CAD/CAM resources is essential to make the most of budgets and to give students the tools that they need. We recommend the packages featured on page 9 as a good place to start. If at all possible, machines should be sited where students have access to see work being machined, and to take some part in the process.

In an ideal world students will have access to all resources whenever needed, but reality says that many departments are split and even clever timetabling won't prevent bottlenecks. It might be sensible to consider several smaller machines in different areas of the department rather than one large machine in a 'hub'. Some schools aspire to an enhanced level of CAD/CAM access, perhaps to meet the needs of Technology or Engineering Specialism and a remit to provide extended resources for neighbouring schools. Whatever the number or scale of machines needed, 2D Design V2 and SolidWorks will provide the core software needed to make them earn their keep.

Colleges & Universities

TechSoft's 2D Design V2 (see page 12) has become increasingly popular at FE and HE level where industry-specific software provides the 'core' but a straightforward route is needed for 2D CAM output. 2D Design V2 provides this and integrates easily with other systems. All TechSoft machines are designed for industrial use and this includes full 3D capability where appropriate. TechSoft are appointed SolidWorks re-sellers for UK education and will be delighted to advise, provide support and training and supply the right package of SolidWorks licences for any college or university adopting this market-leading 3D CAD software.



RouterCAM 1290
Large format routing (See page 72)

Knife Cutting



CAMM 1 GS-24E
Our most popular vinyl / card cutter
(See page 34)

A good quality knife-cutter is the ideal entry point for developing CAD/CAM as an important strand in the Design and Technology curriculum. The machines are quiet and inherently safe to use making them the most child-friendly option for a huge variety of project outcomes in just about every area of the subject. This versatility and a low initial cost means that almost any department can get started with real CAD/CAM activity. These machines are far more than entry level tools and remain essential to provide full CAD/CAM capability alongside milling and laser technology.



TechSoft supply a broad range of Roland machines which represent the industry standard for CNC knife-cutting technology.

Print and Cut



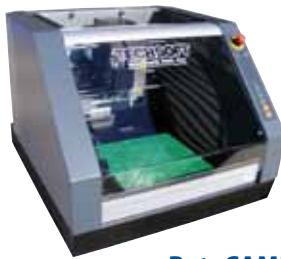
VersaSTUDIO BN-20
A fantastic desktop printer/cutter
(See page 36)

Print and Cut machines provide brilliant large-format colour printing - but that's not all. They also cut out precise profiles around the graphics so decals and self-adhesive wraps can be produced in one operation.

An individual Graphics department will probably find all the capability they need in Roland's VersaStudio BN-20. The BN-20 has a modest desktop format, a modest price and (importantly) card-cutting capability straight from 2D Design. We supply specially-formulated card that accepts the advanced print technology that the BN-20 shares with its bigger brothers. Print and cut packaging projects have never been made to such a professional standard.

The larger TrueVIS range is ideal for large banners and vinyl graphics making it a fantastic whole school resource.

Milling/Routing/Engraving



RotoCamm MDX-40AE
Our most popular miller / router
(See page 66)

Milling, Routing and Engraving are all, in effect, the same thing. All machines in our milling and routing range are capable of milling, routing and engraving - it's more about choosing the right tooling and scale of machine for what you have in mind.

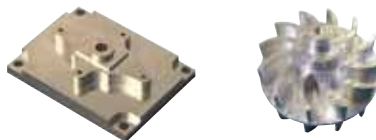


A common misconception is that Engineering courses require CNC milling machinery that will cut steel. This is not always the case.



MODELA PRO II MDX-540E
Large, powerful, ultra high speed
miller/router for the more demanding user
(See page 70)

TechSoft's approach is to supply high quality 'student friendly' machines that will deliver components quickly with the minimum of fuss. When required, the larger Roland machines will happily cope with suitable grades of alloy.



Whether you will be Routing, Milling or Engraving, TechSoft have a machine that will exactly meet your needs. The Roland SRM and MDX ranges provide versatile and popular options for education but, for machining steel, look at our Sieg CNC millers (page 74). If size and speed matter, then our RouterCAM machines (page 72) will make short work of furniture panels and batches of student projects.

Laser Cutting/Engraving



TechSoft LaserCAM A2+
High specification laser cutter
and engraver
(See page 24)

Once schools have a laser they wonder how they ever managed without one - so why is this?

Above all, lasers provide the simplest way possible to get from the CAD drawing to the finished product. They work with extraordinary accuracy and delicacy, and the finished edge is usually just that - finished. Lasers have large work areas and are quick to produce results, so class sets of work can be cut and engraved in normal lesson time, with students directly involved in setting-up and outputting files - great for building confidence. Turnaround is fast and with a few important exceptions, lasers will cut and engrave a huge variety of materials so just about every area of Design and Technology is able to get the benefit.



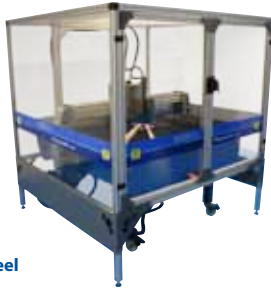
It might be tempting to think that a LaserCAM is the only CAD/CAM machine that you will need and it is certainly true that they can revolutionise the quality of work that students produce. It is important to remember, however, that lasers do not accept 3D data and must not be used to cut vinyl material because of harmful fumes. Milling and knife cutting machines will still be needed alongside lasers to give students a realistic experience of real-world practice, and to have the right mix of tools available for specific applications.

LaserCAM machines are built for world-wide commercial markets and TechSoft have an exclusive arrangement to supply LaserCAM to UK Education. This allows us to work closely with the manufacturers to ensure all necessary safety standards are met and operation is seamless from 2D Design V2. LaserCAMs are supplied as a package that includes everything you need including the highest specification, totally automatic, extraction and filtration system available.

An introduction to CAD/CAM

CAD/CAM Systems

Plasma Cutting



PlasmaCUT
Slice through
up to 12mm mild steel
(See page 30)

Lasers have made a huge impact on student project work but we are often asked "Why can't they be used to cut metals?" In industry, lasers are used routinely for metal-cutting, but high costs and significant risk management issues make the technology unsuitable for educational use – at least at the moment! To meet the need for metal profiling in education, TechSoft are delighted to introduce PlasmaCUT - plasma-beam technology that lets you slice through up to 12mm mild steel with no more hassle than it took to cut card on a CAMM 1.



PlasmaCUT is a high speed profiling machine that works from 2D CAD files generated in 2D Design V2. The machine is housed in an interlocked protective enclosure and connects to a high-efficiency extraction system which captures the particulates produced when plasma cutting mild steel. PlasmaCUT is not a machine for a regular classroom or design studio, but it will fit into any workshop space where there are the usual provisions for hot metal working.

Specialist engineering schools will clearly be interested in the potential PlasmaCUT has to bring sheet metal cutting up to date and, more widely, PlasmaCUT will fit naturally alongside other CAD/CAM and 'benchwork' techniques. It has the power to revolutionise what students are able to do in their project work.

3D Printing



Robox 3D Printer
Build real plastic parts
from 3D CAD files
(See page 53)

3D CAD with Rapid Prototyping (RP) is now an essential tool to enable designers to compete in global markets - it is something all design and engineering students need to know about and, ideally, have access to. TechSoft have been supplying 3D printers since 2004, originally supplying just the professional-series FDM machines from Stratasys.

In recent years, many low-cost alternatives have



come onto the market in the wake of significant media interest about this 'new' technology. Our experience has placed us in a strong position to appraise these budget 3D printers. In our opinion the Robox stands out above the crowd for accuracy, reliability, cost effectiveness, ease of use and safety. It is certainly the ideal machine for use in education – parts just 'lift off' the bed (no glue or tape) and the transparent slide-up cover is automatically locked when a build is in progress. Add to that the automatic levelling plus very fine resolution builds in both ABS and PLA, and you will understand why we recommend it. The Robox offers students the chance to print prototype (often functional) parts with sufficient accuracy and strength for project work. With the optional dual material head providing soluble support removal, there is also the opportunity to make really complex shapes then dissolve away the supporting structures. An amazing machine for such a low cost.

Computerised Embroidery



Brother PR-670E
A multi-needle computerised
embroidery machine
(See page 105)

Brother make high-quality CNC embroidery machines for commercial and domestic markets and have a long-standing reputation for reliability, long life and excellent back-up. Their range includes computerised sewing, embroidery or combined capability, so whatever resources you already have, we can supply a machine to take you on to the next level without making existing machines redundant.



Design work can be anything from simple geometrical shapes and patterns to vectorised, colour-mapped or 'straight' photos – just about anything is possible. 2D Design V2 gives you all the tools you need for the design so, with a site licence for the software, you will have full-class access with no limit to the number of 'seats' you can provide. The only 'extra' needed will be at least one seat of Brother's PE Design embroidery software to convert designs into a stitch pattern.



Brother Innov-is V3
A single needle computerised
embroidery machine
(See page 106)

These great value Brother machines will unlock the potential of CNC embroidery for all students.

Image Transfer for CAD/CAM

Ideal for Enterprise and Enhancing Student Products (See pages 221-226)

TechSoft offer two systems for transferring crisp, full colour images onto a huge variety of project materials. They each offer a professional system to enhance projects or to rapidly and economically add value to 'blank' products. Great for enterprise or in-house production of 'branded' products.



Both have their place in a busy D&T Department. See pages 118-121 to decide which is best for you.

Laser Image Transfer

Every department needs a fast, good quality colour printer so why not choose one that will deal with 'regular' paper printing and become the heart of a system that can transform project outcomes in almost every area of Design and Technology? The LIT process uses an enhanced OKI laser printer and allows images to be transferred onto almost any material that students will be using. LIT can't be beaten for versatility.



Sublimation

Sublimation uses a dedicated Sawgrass inkjet system with gel inks for reliability and ease of use. The first choice for textiles and enterprise work, sublimation does not affect the tactile qualities of the fabric and images are bright and durable. Media for sublimation needs to be polyester-rich or polyester-coated which, in practice, usually means fabrics or ready-prepared blanks (phone pouches, mugs, mouse mats, etc.).



CAD/CAM Packages

At TechSoft we are often asked for advice by both HOD's and architects about the sort of provision required to deliver CAD/CAM across a D&T department. Of course individual school's requirements will always vary according to numbers, existing provision, etc. However we felt that it would be useful to put together some recommendations as to what a sensible provision would be for a "standard" school. Our team of experienced ex-D&T teachers and Heads of Departments have come up with a range of recommendations based on their personal teaching experience, and the experience of visiting hundreds of schools up and down the country. They came up with three categories of provision based not just on cost, but on the school's circumstances, eg., an 11-18 Technology College may well expect to deliver CAD/CAM at a higher level than a 11-16 general comprehensive school.

Having generated these equipment lists, we felt that it would be a good idea to offer them to schools as complete packages:

D&T Basic

This is the minimum provision we would advise to deliver CAD/CAM in an 11-16 school. It will ensure that all materials areas within the KS3 D&T curriculum have shared access to appropriate CAD/CAM resources, and it will provide a basic level of resource for students at KS4.

D&T Standard

This level of provision will enable an 11-16 school to build a D&T curriculum that includes CAD/CAM as a key component of student's work throughout KS3 and KS4. It is particularly appropriate for schools with Technology or Engineering specialist status, and should be considered the minimum provision to resource AS, A-Level or IB courses.

D&T Premium

This is an appropriate level of provision for schools placing a strong emphasis on modern manufacturing in their D&T curriculum, and should be the level to which all schools and colleges aspire. It should be regarded as the standard for schools undergoing new build or refurbishment programs.

Textiles Add-On

Textiles is an important aspect of Design and Technology and one that particularly lends itself to CAD/CAM, both to enhance the range and quality of products that can be made, and to reflect industrial practise. The general D&T packages above will provide some resources for textiles teachers, but we felt it would be helpful to list extra packages as "add-ons" for schools with, or wishing to develop, particular strength in this area. The advantage of adding textile resources alongside the main D&T package, is that schools can be assured of compatibility and common learning platforms in all areas of D&T.

Training Add-On

Training is a vital ingredient when equipping a department with new CAD/CAM machinery. Many TechSoft machines are supplied with Training Packs (see page 228), and some come with on-site training included. However it is advisable, especially when purchasing a large number of machines, to consider additional 'add-on' training days.

Contents

Of course, TechSoft are always happy to talk to schools about their individual requirements if the packages shown are not suitable. We can also supply standard material bundles to help relieve teachers of the burden of having to make dozens of purchasing decisions at an already stressful time.

Design & Technology CAD/CAM Packages for Schools

Prices £*	Basic	Standard	Premium
	£	£	£
Product	Basic Qty	Standard Qty	Premium Qty
2D Design V2 Site & Student Licence	1	1	1
2D PCB Site & Student Licence	1	1	1
SolidWorks School Licence	1	1	1
Stika SV-8E	1	2	2
Camm 1 GS-24E with Accessories (Includes: Spare cutter)	1	2	2
VersaSTUDIO BN-20 (Standard 4 Colour Configuration)		1	
TrueVIS SG-540			1
Combined Laser Image Transfer (LIT) and Sublimation Full Starter Pack (Includes TMT OKI A4 C612N laser printer, Sawgrass Virtuoso SG400 A4 printer, A4 Pink heat press with 2 PTFE sheets, ARC mug press, satin mug wrap, A Pad, T Pad, sponge, heat resistant tape, 200 sheets A4 sublimation paper, 100 sheets LIT A4 fabric transfer paper, 100 sheets LIT A4 non-fabric transfer paper)	1	1	
Combined Laser Image Transfer (LIT) and Sublimation Full Professional Pack (Includes TMT OKI A3 C8432WT white laser printer, Sawgrass Virtuoso SG800 A3 printer, Deep A3+ Swing Press, Cap/Pocket Press, Double Mug Press, A Pad, T Pad, sponge, heat resistant tape, 100 sheets A3 sublimation paper, 50 sheets LIT A3 professional fabric transfer paper, 50 sheets LIT A3 rough surface transfer paper)			1
RotoCMM MDX-40AE Workstation Package & Accessories (Includes: TechSoft Workstation with auto-switch extractor, Self-Centering Vice, Mixed Tool Pack, 3D Tool Pack, PCB Tool Pack)	1	2	2
Modela Pro II MDX-540E Stand Alone Package & Accessories (Includes: Self-Centering Vice, Tee-Slot Bars(Pack of 2), Machine Vice, Extractor with Attachment, Mixed Tool Pack, 3D Tool Pack, PCB Tool Pack)		1	1
RouterCAM 1290 with Accessories (Includes: Extractor with Attachment, Collet Pack, Router Tool Pack, Plastics Tool Pack, 3D Tool Pack)			1
LaserCAM A2+ 30W Package	1	2	1
LaserCAM A1+ 60W Package			1
RoboDual 3D Printer	1	3	5
uPrint SE Color 3D Printer and Removal System (Includes: Stand)			1
Boxford CNC Miller 190VMCxi and CNC Lathe 160TCLi			1

Textiles "Add-on" Packages for Schools

Prices £*	Basic	Standard	Premium
	£	£	£
Product	Basic Qty	Standard Qty	Premium Qty
PE Design Plus 2	1	1	1
PE Design 10		3	5
Brother Innov-is 35	20	20	20
Brother Innov-is F440E with Thread Starter Set	1	1	1
Brother Innov-is V3 with Thread Starter Set	1	2	3
Brother PR-670E with Thread Starter Set		1	1
Cap, Sleeve, Shoe & Narrow Clamp Frames for PR-670E			1
Camm 1 GS-24E with Spare Cutter	1	1	1
Sublimation Textiles Starter Pack A4	1	1	
Sublimation Textiles Starter Pack A3			1

Training "Add-on" Packages for Schools

Prices £*	Basic	Standard	Premium
	£	£	£
Product	Basic Qty	Standard Qty	Premium Qty
Additional Day(s) of Training	1	2	3
<i>N.B. Additional training days can be taken at any time. It may be beneficial to schedule refresher training at a later date, once the department has had a chance to start teaching with the new equipment.</i>			

* See Pricing Information on page 2.

Project Management Services

Design and Planning

Consultation – Sharing Objectives

Teachers will always be central to awakening and nurturing creative talent in young minds so sharing the vision for learning spaces with the right layout, furniture and equipment is the essential first step. Architects, building managers and budget holders will have their own priorities so, at the outset, TechSoft will actively seek a dialogue with all partners to ensure the project begins with the right design brief.

The Right Resources

TechSoft Project Managers are keenly aware of new developments and methodologies in practical curriculum areas and are able to advise and specify the right range and level of resources to support learning. We design and equip learning spaces to meet current needs but, where possible, with sufficient flexibility to accommodate timetable shifts and different emphases as national and local priorities dictate. This Guide contains a comprehensive selection to meet all likely needs, but if a particular brand of equipment is requested by teaching staff (and it is not listed in this Guide) we remain happy to discuss options. We will always tailor proposals to best meet individual requirements and a dialogue with all parties concerned will be a part of this. The right mix of hand, machine and CNC equipment will be specified with care to provide best value and a safe, efficient and inspiring workspace for students and teachers.

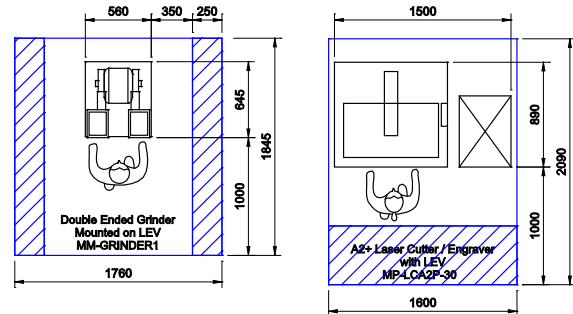
Design and Planning



Furniture and machinery requires floor or bench space, sometimes space for moving parts and (crucially) a safe working area (SWA) for the operator. Many of these details are the subject of statutory guidance. After initial consultation meetings, TechSoft will prepare outline layouts and machine specifications to meet the agreed design objective. Due regard will be taken of statutory regulations including BS4163:2014 and DfES Building Bulletin 81. Initial layouts will highlight where additional services are required, and further drawings and specifications will be prepared for M&E contractors if appropriate. Where services are fixed, layouts will be created to optimise work space and minimise costs. After further consultation (and amendment if needed) we will prepare agreed layout drawings for all parties.



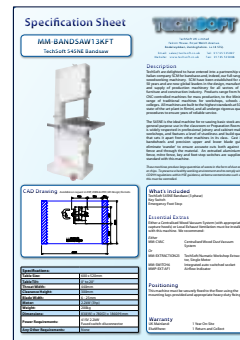
CAD Drawings

TechSoft have ready-prepared CAD drawings showing the 'footprint' and SWA (safe working area) for all items in this guide where these dimensions are critical. FF&E contractors, design managers and consultants preparing room layouts themselves will find these an invaluable tool. A CD containing all the drawings in DXF, DWG and DTD (2D Design) format is available from TechSoft on request.



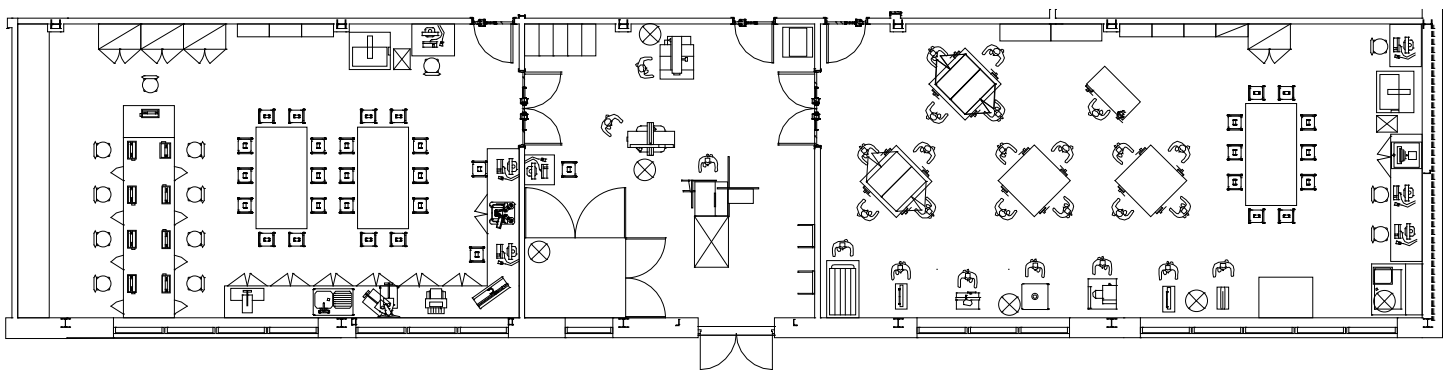
-  **Overlap of Space**
These areas can be overlapped and shared between items of the same type (ie., machines or furniture). N.B. All dimensions are in mm.
-  **Clear Working Space**
These areas should be kept clear at all times. The exception to this rule is Prep room machines where clear working spaces can overlap (based on the assumption that only one machine will be operated at a time).

Mechanical & Electrical Specifications



Where appropriate, TechSoft will supply full specification sheets for all machines under consideration. These sheets contain technical specifications for calculating electrical loadings and determining any additional services required.

An installation drawing is also included and, for ease of reference, this shows key electrical specifications and the detail of specific M&E provision needed.



Installation and Commissioning

Good working relationships with suppliers, builders and construction teams help to make sure deliveries happen to schedule, access arrangements are all in place and all equipment is placed where planned. TechSoft maintain an on-site presence throughout this critical phase to ensure a trouble-free operation where potential problems are nipped in the bud. Installation is carried out by our own engineers who make sure all statutory and agreed requirements are met in terms of fixing down, key-switches, footstops and electrical wiring. Commissioning involves a thorough check of compliance and machine functions before signing off and handover.



Training and Support

Our commitment to 'getting it right for the teacher' continues long after commissioning and handover. TechSoft's Project Managers actively seek a dialogue with teachers and technicians at an early stage so that any technical or training issues can be dealt with swiftly. Commissioning always involves familiarity training and includes free lifetime phone or email support. Most of our CAD/CAM equipment is supplied with free, detailed training material and some larger items have on-site training courses included.



To help teachers to get the best from their new resources, we recommend a phased on-site training package is considered alongside the equipment schedule. This could include advanced operation, curriculum applications and project ideas. Any such package would be bespoke but would typically be run (by mutual agreement with teachers) in the first and second years after handover.

Service and Maintenance

Keeping workshops and machinery in optimum condition is essential for safety and for efficient work. All workplaces, including educational establishments, have a legal obligation to carry out servicing and compliance checks, and need policies and maintenance records in place to demonstrate this. TechSoft are able to arrange thorough inspection and service schedules for all workshop machinery installations. Checks are carried out in-line with statutory requirements, electrical checks and adjustments made as required, and any minor mechanical or electrical issues attended to as part of the service. A full service report is provided and this will satisfy the need for record keeping, will give a condition report on each machine and will highlight the need for any remedial work should it be required.



Ysgol Bro Teifi

"TechSoft were commissioned to outfit both a woodwork and an engineering workshop in a new build. Although the original specifications for the equipment were good from the outset, TechSoft really listened to the needs of the individual subject specialists and tailored the exact requirements to suit the curriculum demands of the department. This was only the start of the process, the ongoing support from TechSoft has been second to none; they are always available for advice. The equipment is good, solid benches with upgrade vices for engineering activities. The storage solutions are ideal, strong yet adjustable. The C-VAC extraction system is a revelation, we're two years in and I've never worked in a workshop that is as dust-free as ours. The fact that it's automated means pupils don't need to turn it on, along with the machine they're using. If I had to sum up my experience of TechSoft I'd say it's a personal service delivered by professional people."

Andy Walters (Design Technology Teacher)

Aldworth Science College

"After a fire in our technology room, TechSoft provided tremendous support in re-designing the room to get the best use of space. From ordering to installation, on-going training and support, I cannot fault TechSoft's service"

Kirsty Turner (School Business Manager)

William De Ferrers School

"The William de Ferrers School engaged the services of TechSoft to design and coordinate the equipping of two engineering suites and a graphics room as part of a new build project. The end to end project management service provided by TechSoft staff was excellent, the standard of detailed knowledge and workmanship were equally good. The school staff involved in the project found TechSoft professional in their approach and are extremely happy with the end result."

Russell Ayling (Headteacher, MA, BA, NPQH, FCSI)

Christ's College

"The Senior Management at Christ's College and I have found TechSoft's approach to both the design and implementation of our new D&T facility to be exemplary. We are proud of our new workshop and delighted at the response of our pupils as they enjoy working in it. We strongly appreciate TechSoft's considerable efforts to deliver the project on-time and have been impressed with their unprompted willingness to always 'go the extra mile' to meet deadlines, to deal with difficulties and to ensure all workmanship is of the highest standard. We have been particularly pleased to work with TechSoft's Project Manager, Tim Elderton who has been sympathetic to our needs from the outset, an amiable colleague to work with and highly professional in his approach. Above all, he has shared our vision for what our pupils deserve and shown commitment to deliver this in full. We have no reservation in recommending TechSoft for any new school or refurbishment project."

Chris Smith-Keary (Head of Design and Technology)

Luton Sixth Form College

"The College found TechSoft to be very helpful and responsive. They gave us sound advice on equipment selection as we planned our transition to a new technology base. TechSoft were able to supply an excellent range of products for use by teaching staff and students as well as workshop machines for our facilities staff. All have proved safe to use and robust in service. The College now benefits from the latest technology and the students really enjoy working with the new machines. I would have no hesitation in re-employing or recommending TechSoft."

Tony Whitehead, PM and Facilities Manager

TechSoft Design Tools Software

2D Design

Graphic Design, Technical Drawing and CAD/CAM



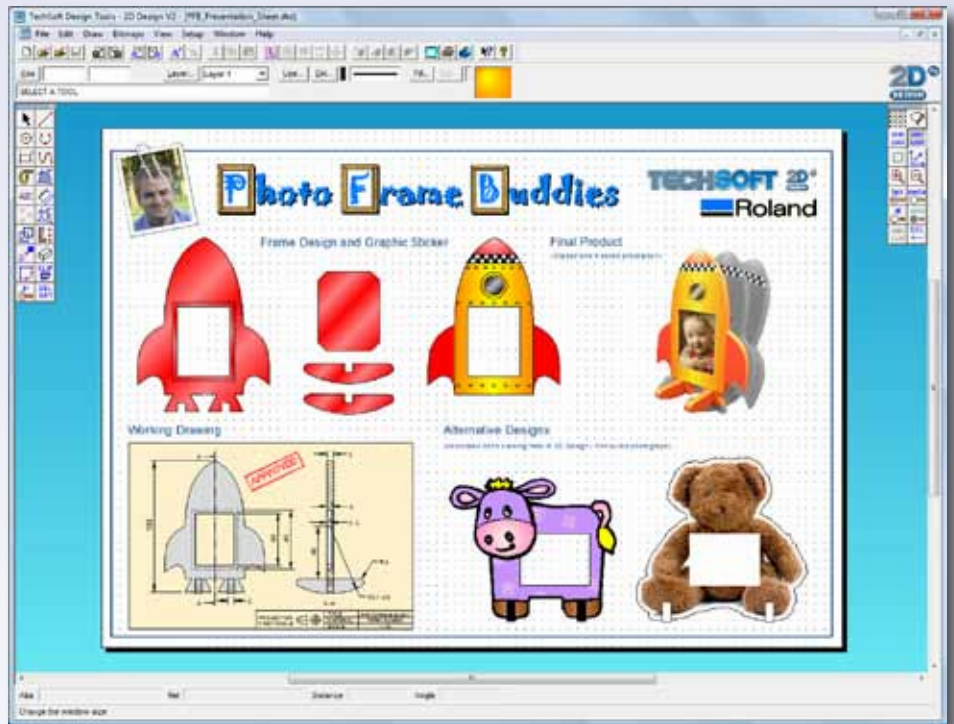
TechSoft created 2D Design for users who require sophisticated drawing and design features, but don't want to spend a lifetime learning to use them. Although designed with professional capability, its ease of use means that 2D Design is the CAD standard for the vast majority of UK secondary schools. Whether you need to produce traditional engineering drawings, colourful 'free-form' designs for embroidery, or smart graphical presentation sheets, 2D Design V2 has been carefully developed to give you all the tools you need – and all in one place.

Graphic Design

2D Design V2 offers thousands of exciting options for combining vector drawing with text, bitmaps, photographs or clip-art to create stunning graphic products. Comprehensive editing tools allow any image to be clipped to size and shape; bitmap images can be converted into a vector drawing; individual font characters can be customised; colour fills can be single colour, graduated, texture or pattern, etc. The options are endless – the texture fill could be used to simply render a drawing with a photograph of the material it will be made from; the pattern fill could become an application in its own right to design patterns for Sublimation (see page 120) work or embroidery.

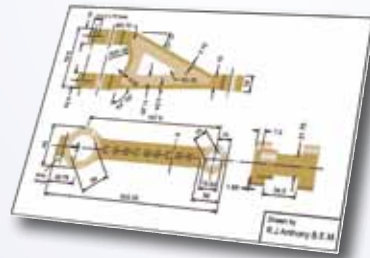


The graphics elements of 2D Design V2 give the student all the tools they need to design packaging products, posters, point-of-sale displays, greeting cards, etc. In addition, 2D Design V2 provides an intuitive tool to compile design folder pages by importing photographs, scanned sketches and research material alongside CAD drawings – the possibilities are endless.



Technical Drawing

2D Design V2 makes an excellent electronic drawing board with an extensive range of tools to enable you to accurately draw and dimension anything from a nut and bolt to a super tanker. All the line-geometry, transformation, edit, attach and dimensioning tools are there.



If you are new to CAD, but familiar with conventional technical drawing, you will soon be producing work to meet any sector standard. Layers can be used for construction work, standard sheet templates, dimensioning or output to CAM, etc. There is no practical limit to the complexity of drawing 2D Design V2 is capable of doing. We supply numerous universities who find it gives them everything they need from a 2D CAD platform - it integrates easily with other packages and it provides a hassle-free way to output to CAM machinery.

“2D Design has the best combination of powerful tools and ease of use available”

CAD/CAM Output

A key feature of 2D Design V2 is the high level of integration that has been built in between the output device and the drawing stages of design.



When starting a drawing you will typically set your page size to suit the machine you will be using - at its simplest level this means that the design will 'fit' and you can position the job accurately on the work area, but there is more to it than that. Once set, all the particular features of that machine become available so, for example, you can add registration marks ready for print-and-cut using knife-cutting machines and you will see a dialog box to set up the rotary table for a LaserCAM. When ready to output to many CAD/CAM devices and all our Roland and LaserCAM machines, there is one simple machine-specific dialog box to deal with and no tedious post-processing to confuse matters.

Powerfully Simple

Unlike many CAD packages, 2D Design V2 has a simple desktop that lets learners start with basic tools, adding new tools as their confidence grows. Everything about the software can be customised to suit different ages and abilities, and versatility means that learning can be built-in to any manner of project applications from KS2 onwards. By KS4, 2D Design V2 simply becomes a powerful tool for designing and making, and continues to be so into sixth form and beyond.



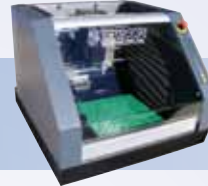
Just a few of the CNC machines that are **DIRECTLY CONTROLLED** through 2D Design V2



Pre-printed card is scored and cut in a GS-24E



Card Packaging



Flat Pack Model Chair



Slot Jointed Acrylic Photo Frame

Features

- Exhaustive geometrical constructions including circles, arcs, lines, tangents, normals, etc.
- Comprehensive drawing aids, user-defined grids and attach (snap).
- Powerful tools such as fully tuneable bezier curve drawing, text flow along a path, etc.
- Comprehensive text facilities, even exceeding those in many sign-writing packages.
- Single line fonts and an in-built font editor/designer.
- Bitmap to vector conversion.
- Clip path tools, essential for creating professional high end graphic images.
- Comprehensive graduated, texture and pattern fill routines.
- Comprehensive transformation tools including move, mirror, size, array and distort.
- Automatic or manual dimensioning. Work to pre-set or user-defined scales.
- Contour feature to off-set lines. Invaluable for creating cutter-compensated tool paths or tracing.
- Powerful editing and delete features, unlimited user-named drawing layers. Cut and paste to and from many other packages, including Word.
- Import/Export BMP, DXF, EMF, HPGL, TIFF, JPEG, PNG, WMF, plus legacy Acorn formats.

Software Information

Site Licence

A Site Licence allows a school/college to install the software on any number of computers on the school site.

Student Licence

A Student Licence allows a school/college to distribute a special non-output version of the software to students and teachers for home use. Students will be able to save work for output back at school. Schools may choose to charge a nominal amount per student, to recoup the cost.

Minimum Hardware Requirements

Windows 2000 / XP / 2003 / Vista / 7 / 8 / 10.
Microsoft recommended minimum hardware specification advised.
Network compatible (site licence only).

Ordering

In order to avoid software theft, the software is encrypted with the name of the licensed user, typically the name of a person, or the name of an individual establishment.

When ordering please state:

- Name of licensed user/site (max 28 characters, including spaces).
- Address for site licence if appropriate.

Prices £*

*See Pricing Information on page 2

TS107	2D Design V2 Single Licence	
TS108	2D Design V2 Site Licence	
TS109	2D Design V2 Student Licence (site licence holders only)	
TS119	Upgrade Single Licence V2 to Site Licence	

Version 1 to Version 2 Upgrade Prices:

TS102	Single Licence V1 to Single Licence V2	
TS106	Single Licence V1 to Site Licence V2	
TS103	Site Licence V1 to Site Licence V2	
TS104	Student Licence V1 to Student Licence V2	
TS105	Site & Student Licence Upgrade V1 to V2 (Save £45) (N.B. To be eligible for the combined Site & Student Upgrade both Site and Student Licenses must currently be held for V1.)	

2D PCB

Printed Circuit Board Design & Manufacture

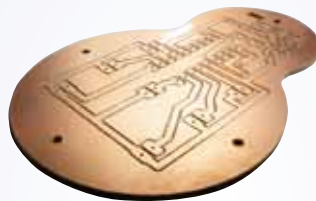
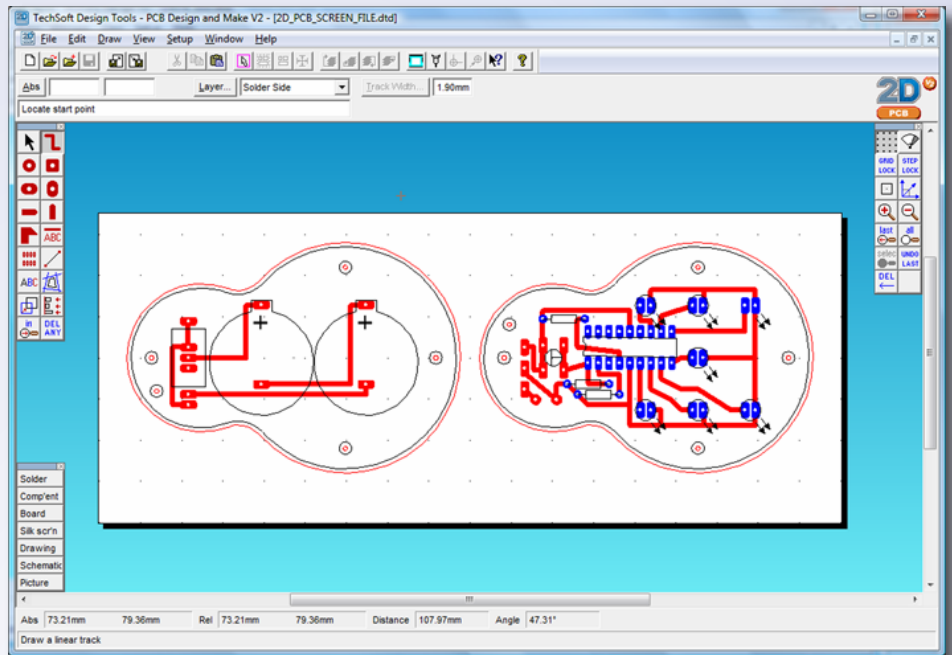
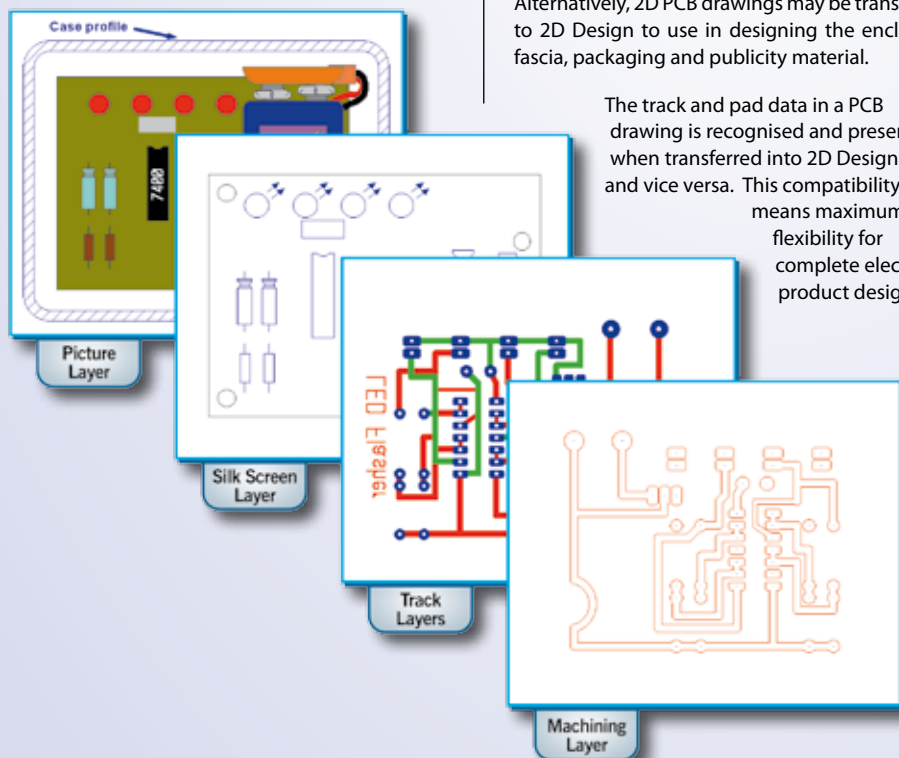


2D PCB is effectively two programs in one package.

Firstly, a very simple to use PCB design package, developed specifically for the needs of education and secondly, a PCB manufacturing system. The system allows the use of a STIKA, CAMM 1, VersaSTUDIO or TrueVIS to cut out the tracks in sticky backed copper foil, or the use of a SRM-20E, RotoCAMM, EGX-350E, etc., to engrave around the tracks, drill the holes and cut out the board, for a completely finished PCB.

PCB Design

2D PCB provides a convenient and professional method of designing printed circuit boards and drawing schematics. Although a very comprehensive system, the most important design consideration for our software writers, has been to make it easy to use and accessible to students. It is ideal for both simple single-sided PCBs, and complex double-sided boards. A library facility allows standard component libraries (supplied) to be used. Alternatively, user defined components, or even whole circuits, may



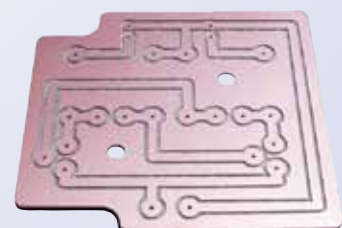
be saved as library items. Thus it is possible to create small system boards which may easily be loaded and "joined" together to form complete circuits. A large selection of pre-drawn "Alpha" circuit modules is included.

Links with 2D Design mean that design drawings may be used as templates, allowing accurate positioning of components on the board. Alternatively, 2D PCB drawings may be transferred to 2D Design to use in designing the enclosure, fascia, packaging and publicity material.

The track and pad data in a PCB drawing is recognised and preserved when transferred into 2D Design V2 – and vice versa. This compatibility means maximum flexibility for complete electronic product design.

Features

- Shares a common user interface with education standard drawing package, 2D Design V2
- Colour coded double layer boards, silk screen and schematic layers
- Preset or user definable pads and tracks. Tracks may be drawn at any angle
- No practical limit to size of board or component count
- Comprehensive transformation commands, move, rotate, mirror image, copy and array
- Editing mode allows single items, or groups, to be moved while maintaining connectivity
- Comprehensive zoom facilities
- User definable library items, allows whole circuits to be used as library items, thus enabling "system" circuit design
- Opens 2D Design files allowing board profiles to be matched to enclosure design, component profiles to be incorporated into library items, etc.
- Graphical output via Windows printer drivers
- Manufacturing output to Roland CNC Machines



PCB Manufacture

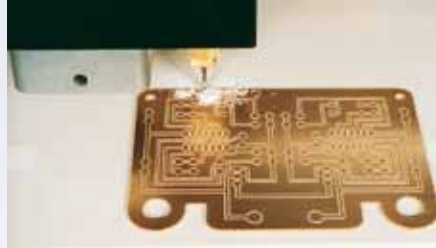
Conventional school PCB manufacture has been fraught with problems. Now TechSoft have devised clean, quick and simple solutions using manufacturing machines already widely available and proven in schools. Look at the advantages:

- NO** "Bridging" of tracks due to faulty etching.
- NO** Dangerous chemicals and messy etch tanks.
- NO** Chemical disposal problems.
- NO** Multi-stage manufacturing processes.
- NO** Expensive photo etch board.
- NO** Guessing exposure times (and getting it wrong!).

The software allows two basic manufacturing strategies, engraving onto conventional PCB board using a SRM-20E, RotoCAMM, EGX-350E, etc., or cutting a circuit from sticky backed copper foil using a STIKA, CAMM 1, etc.

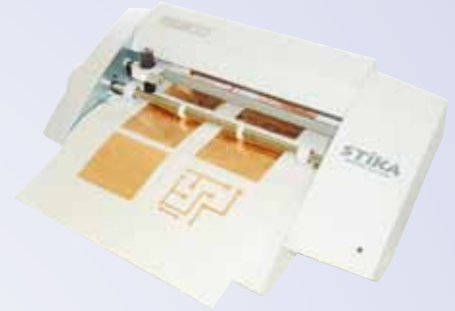
Engraving PCBs

A piece of PCB board is placed on the machine bed, and the *Make PCB* option is selected. The machine will then automatically engrave the tracks, drill the holes, and cut out the board. This is a quick, clean and reliable process (eg., a typical



simple 555 based circuit should take no more than a couple of minutes to complete on a RotoCAMM). Virtually any circuit design can be manufactured with this process. It is even possible to put tracks between DIL pads!

Copper Foil PCBs



This process, developed by TechSoft, uses a self-adhesive copper foil (Cutronics). This fits into any Roland vinyl cutter and cuts just like vinyl. When weeded, the circuit can be applied to any suitable substrate such as plastic sheet, wood or card. (If card is used it is possible to make bendy, even "roll up" circuits).



This process is ideally suited to simple circuits with larger pads and tracks, a marvellous introduction to PCB manufacture.



Electronic Dice

Isolation Engraved PCB
(FR2 PCB Laminate - Paper & Resin board ideal for CAD/CAM)

Software Information

Site Licence

A Site Licence allows a school/college to install the software on any number of computers on the school site.

Student Licence

A Student Licence allows a school/college to distribute a special non-output version of the software to students and teachers for home use. Students will be able to save work for output back at school. Schools may choose to charge a nominal amount per student, to recoup the cost.

Minimum Hardware Requirements

Windows 2000 / XP / 2003 / Vista / 7 / 8 / 10.

Microsoft recommended minimum hardware specification advised.
Network compatible (site licence only).

Ordering

In order to avoid software theft, the software is encrypted with the name of the licensed user, typically the name of a person, or the name of an individual establishment.

When ordering please state:

- a) Name of licensed user/site (max 28 characters, including spaces).
- b) Address for site licence if appropriate.

Prices £*

*See Pricing Information on page 2

TS115	2D PCB Site Licence	
TS116	2D PCB Student Licence	
Version 1 to Version 2 Upgrade Prices:		
TS117	PCB Design & Make Site Licence upgrade to 2D PCB Site Licence	
TS136	PCB Design upgrade to 2D PCB Site Licence	
TS137	PCB Make upgrade to 2D PCB Site Licence	
TS118	PCB Design & Make Student Licence upgrade to 2D PCB Student Licence	
TS138	PCB Design & Make Site and Student Licence upgrade to 2D PCB Site & Student Licence <i>(Save £10)</i>	

Accurate Drawing and Design Software for Key Stage 2



Wow...That's Helpful!

TechSoft are keenly aware that Design and Technology in Primary Schools brings an entirely new set of challenges. Software has to be easy to master and must quickly prove itself to be exciting and motivating, especially where content is taught within themes that have their own learning priorities. We have listened carefully to teachers and have taken a long hard look at our well-established Primary Design programme with a clear aim to make it the most helpful, versatile and easy-to-use drawing package you could wish for. The result is 2D Primary and we reckon it's something with enough 'wow' to see it being used for Design and Technology and much more besides.



Drawing with Computers

Most simple 'paint' packages work by colouring dots (pixels) on the screen - this looks OK and you can print out the drawing, but that's about all. 2D Primary is a 'vector' package and every line and shape you draw will have a unique mathematical identity defined in terms of coordinates and geometry. You won't be aware of this when designing, but it means that drawings can be edited, dimensioned and output to a CAM machine. Printed copy will be exactly right size and not scaled to fit the page. This is the way that most commercial Graphic and Computer Aided Design packages work, so 2D Primary is a great preparation for future learning and provides pupils and teachers with powerful new tools at KS2. The software uses a familiar Windows interface and is logical and easy to use, so pupils and teachers will quickly be up to speed.



Features

- A wide variety of drawing functions, lines, circles, shapes, tangents, polygons, etc.
- Great text facilities. Use any outline font, any size position or orientation, any colour including texture fills and drop shadows.
- Comprehensive transformation functions including, move, mirror, copy, rotate, re-size and distort.
- Easy to use grid function. Lock onto cm or mm grids for accurate drawing, change to an isometric grid for 3D effect.
- Attach tool to 'snap-to' circle centres, end points and intersections.
- Select from three levels of desktop to suit different ages and abilities.
- Comprehensive, quick and easy to use Zoom tools.
- Powerful editing functions including Edit and Add nodes to lines and shapes.
- Cut and paste facilities, allows you to link with most Windows packages.
- Import and Export files in most common formats (eg., jpeg, tiff, gif, wmf, emf, etc.).
- Clip and crop photo-images to shapes or 'freehand'.
- Change photo-images to greyscale, monochrome or reduce image size.
- Output via Windows printer driver to any standard printer, or output directly to Roland SRM-20E, Stika or CAMM 1.
- Comprehensive fill tools including linear or circular graduated fills with any number of colours, and texture fills using bitmap files. Large selection of common texture fills supplied in a library.
- Total compatibility with 2D Design V2 to allow cross-phase working.

Drawing and Design

2D Primary can't be beaten for making accurate project plans. These can include dimensions and can be 'filled' in flat colour, shaded (or graduated) colour, or even photo-images of the material they will be made from. Plans can be printed onto label paper to make accurate templates, or pages can be bordered, titled and printed onto regular paper as a record for design folders.



2D Primary makes a great graphic design tool as well. Text, photographs and accurate drawings can all be combined making it ideal for presentation pages, or for creating posters and leaflets. We've been careful not to overload the software with too many tools but have included simple ways to change photo-images and trim them to size and shape.

Not Just For D&T

You don't need to be aware of the geometry working for you under the surface of 2D Primary, to be able to create accurate drawings, but it is there and if you want to focus on numeracy then why not? Many Primary schools find it the ideal package to support pupil's learning in mathematics; shape, space, pattern, size and number. Using 2D Primary to design presentation pages could, of course, be used anywhere in the curriculum.

Computerised Manufacture

Using 2D Primary for CAM (Computer Aided Manufacture) takes you onto another level - not only can you draw things, you can make them too!

Knife Cutting

Lines drawn in 2D Primary are more than just images - in 'computer-speak' they are called vectors. These show you what you have drawn but also contain coordinates to 'steer' a CNC machine. A simple Stika machine (see page 33) makes a great starting point for proper CNC work. A Stika uses a tiny blade to cut a vast range of 'applied media' to make, for example, stickers, badges, or iron-on logos. The process is simple, safe and output is direct from the 2D Primary drawing.



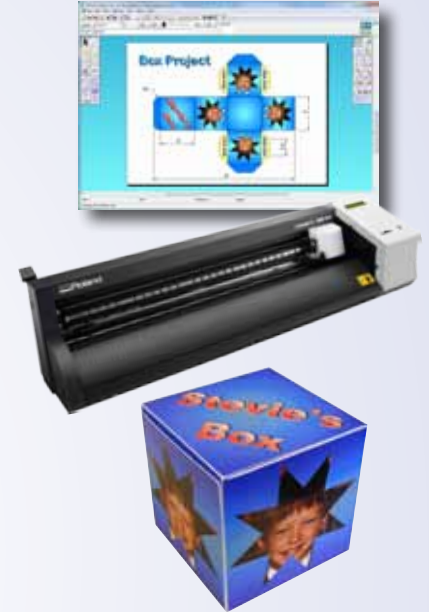
Milling/Engraving

CNC milling and engraving machines work in the same way as knife-cutters but use a rotating 'bit' (rather like a drill) to cut and remove solid material. For an introduction to CNC machining, the Roland SRM-20E (see page 65) is the ideal choice for most Primary schools. Using the same 2D Primary software, the SRM-20E will happily cut out shapes in light modelling materials to make, for example, accurate parts for projects, stamps, badges and moulds. The SRM-20E is safe and simple to use.



Print and Cut

At its simplest, the Roland CAMM 1 GS-24E (see page 34) is a super-fast, super large Stika. It is therefore useful for enterprise projects, but there's more to it than that! The GS-24E has an optical registration feature that allows the cut path to be aligned with printed graphics. It also has sufficient power to cut thin card. This means that stickers and card packaging nets can be printed using a regular printer and then cut-out to professional standards using the GS-24E.



Software Information

Site Licence

A Site Licence allows a school to install the software on any number of computers on the school site.

Student Licence

A Student Licence allows a school to distribute a special non-output version of the software to students and teachers for home use. Students will be able to save work for output back at school. Schools may choose to charge a nominal amount per student, to recoup the cost.

Minimum Hardware Requirements

Windows 2000 / XP / 2003 / Vista / 7 / 8 / 10.

Microsoft recommended minimum hardware specification advised.

Network compatible (site licence only).

Ordering

In order to avoid software theft, the software is encrypted with the name of the licensed user, typically the name of a person, or the name of an individual establishment.

When ordering please state:

- Name of licensed user/site (max 28 characters, including spaces).
- Address for site licence if appropriate.

Prices £*

*See Pricing Information on page 2

CAD Software:

TS111	2D Primary Site Licence*	
TS112	2D Primary Student Licence*	

Version 1 to Version 2 Upgrade Prices:

TS113	Primary Design upgrade to 2D Primary	
TS114	Primary Design Student Licence upgrade to 2D Primary Student Licence	

CAM Machines (controlled by the software):

Knife Cutters

MP-STIKA-SV8E	Roland Stika SV-8E (inc TechSoft Training Pack). See page 33.	
MP-CAMM1-GS24E	Roland CAMM 1 GS-24E (inc TechSoft Training Pack). See page 34.	

Milling Machines

MP-RL-SRM20E	Roland SRM-20E (inc. TechSoft Training Pack). See page 65.	
---------------------	--	--

CAD/CAM Package:

TP-CADCAM-PR12	Primary CAD/CAM Package (includes 2D Primary Software Site Licence, Stika SV-8E Knife Cutter, SRM-20E CNC Miller & Training Packs)	
-----------------------	--	--

* 2D Primary is only available at this special low price to schools teaching students of year 6 and below. All other establishments must pay the full price of £175 for a single licence, £425 for a site licence.

The Complete 3D Design and Engineering Education Solution



CAD For Creativity

SOLIDWORKS was conceived to give designers an intuitive and powerful tool which quickly gets past learning how to use it, and on to using it to design better products. Speak to any design professional or undergraduate and they will recognise SOLIDWORKS as a global leader in 3D CAD - and there's a pretty good chance it is what they use in their day to day work.

Designed To Be Intuitive

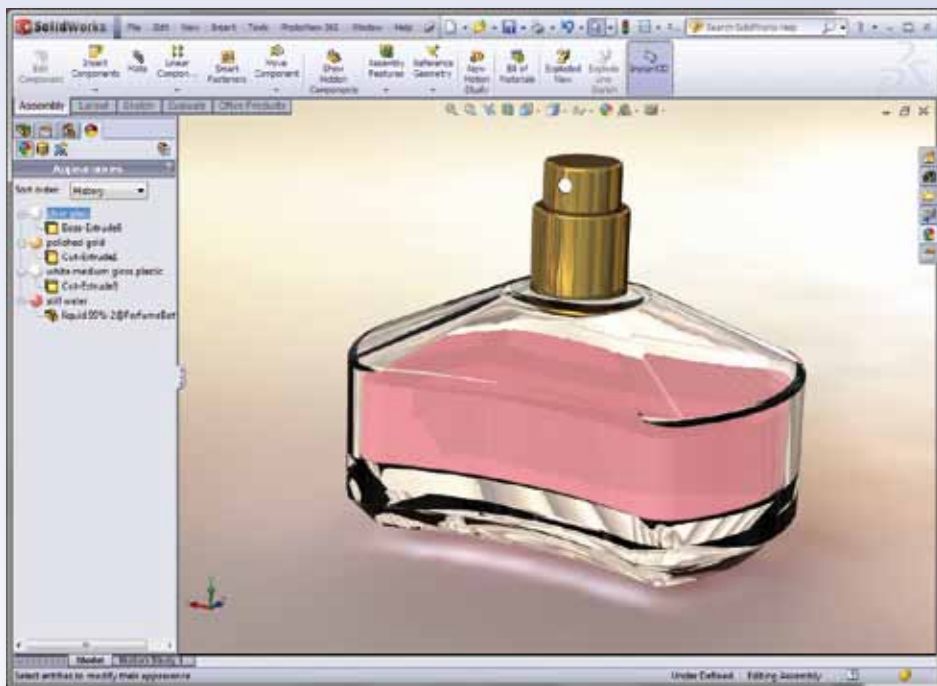
It makes sense that students should be using industry-leading products but commercial credibility is not the same as educational suitability. SOLIDWORKS is different. We believe that the designed-in advantages of SOLIDWORKS make it by far the most appropriate and easiest to use system for education.

Grasping the Basics

3D CAD does require a new way of thinking and you start by getting the idea of planes, features and sketches clear in your mind. SOLIDWORKS makes these key concepts as clear and obvious as possible so, once grasped, learning builds on understanding rather than remembering which button to click. Help is always available to show you where tools are and what they do. Whilst working, you can pause at any point to run through one of the many on-screen interactive tutorials if needed. Each step of the modelling process is recorded in a history bar and, using this, you can go back to any point and edit the original work. Once the edit has been made all subsequent work will automatically update. Gone are the days of 'bin it' and start again!

Find Your Own Level

Alongside the main design area is a 'Home' tab with access to on-line support, further tutorials and your own customer portal where case studies can be downloaded. Example videos range from entire millionaire yachts to jewellery and brakes for F1 cars - all modelled and tested in SOLIDWORKS. The examples demonstrate what a powerful package SOLIDWORKS is but, if it seems daunting, don't worry. Few users will be experts in every aspect of the software, and most will be using the main features and tools that apply to their particular sector. Education is no different. Most of the time students will be using SOLIDWORKS to create straightforward parts that they can assemble, test, render and animate on-screen. If this seems like you're only scratching the surface then that's OK. As confidence grows, more advanced tools can be added to the repertoire and all have the same intuitive feel and built-in support.

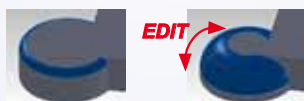


Direct Modelling – 'Instant 3D'

SOLIDWORKS models are usually created by building up features based on 2D geometry. This 'feature-based-modelling' is ideal for teaching and starting-out, but it's not the only way of working. Once a basic model is created then 'Instant 3D' functionality becomes available.



Most features can then be adjusted, copied, moved or edited by simply clicking and dragging with the mouse.



'Instant 3D' gives SOLIDWORKS the best of both worlds - direct modelling when a 'free-form' experience is helpful, or feature-based when key dimensions and parameters are being set. There's no 'big decision' needed about which way to work - simply choose what works best for you at any stage in the modelling process.

Home Use

Once the basics have been taught in school, students will want to develop expertise independently and, in our experience, this is where SOLIDWORKS really starts to take off. SOLIDWORKS has a huge web-presence so students will soon find masses of resources and like-minded colleagues keen to share ideas, tips and techniques. This way, students will develop personal expertise at a pace that would be hard to match in the classroom. To facilitate this important learning opportunity, schools and colleges will need to maintain their subscription to SOLIDWORKS and provide access to the Student Standard (formerly SDK) and Student Premium (formerly SEK) licenses (see page 19).

SOLIDWORKS Analysis Tools

Behind the 3D image, a SOLIDWORKS model can be referenced to other data that describes, for example, material properties or manufacturing methods. The following packages operate within SOLIDWORKS to give students unparalleled access to sophisticated analysis tools. Operation is via a simple wizard in all cases, ie., the software does all the hard work!

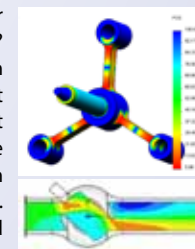
Sustainability

Decide what your model is made from, the manufacturing method, where it will be made and where it will be used. A life cycle assessment is then calculated and a report shows the environmental impact of your design. Try it again but make some changes to see how it affects your 'green' credentials.



Simulation

Will your model bend or break when you use it? SOLIDWORKS Simulation is a simple Finite Element Analysis (FEA) tool that allows students to analyse stress, flow and motion in relation to their 3D model. Results are displayed graphically as colours on the model, or as an animation, making it easy to spot potentially weak areas of the design.



SOLIDWORKS Costing

The SOLIDWORKS Costing tool provides estimates of how much parts should cost to manufacture. SOLIDWORKS models are easy to edit so why not create different versions of your design and try to 'economise' in the choices you make. SOLIDWORKS costing can compare models so you can develop the most economical solution.

SOLIDWORKS 3D Design, Simulation & Analysis Software

SOLIDWORKS Education Edition - School Licenses

CAD/CAM Output



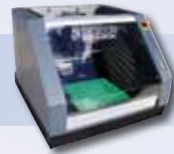
Visual Toolpath



Visual Toolpath



AutoMaker™



iPod Docking Station



Aluminium Injection Mould



Don't let a 3D image on the screen be the end of the process for your students. SOLIDWORKS models can be easily saved as STL files for manufacture on all Roland 3D capable miller/routers, the TechSoft RouterCAM range and our 3D Printers. The students can then realise and handle their designs.

Home Use - Student Premium or Student Standard?



Student Premium (formerly SEK) is a time-limited, stand-alone licence for the full SOLIDWORKS Education Edition. Each year a school licence subscription provides 60 one year Student Premium licences (activations) for use by students and teachers on their personal laptops/home PCs.

Student Standard (formerly SDK) is a time-limited, stand-alone licence for the core 3D Design part of the SOLIDWORKS Education Edition. Each year a school licence subscription provides an unlimited number of one year Student Standard licences for use by students and teachers on their personal laptops/home PCs.

For both the Student Premium and the Student Standard Licenses, the school can distribute the software either by instructing their students to download it free of charge, or by purchasing DVDs.

Curriculum Resources



Comprehensive, interactive tutorials are built-in to SOLIDWORKS and these are a great way to get started. Whilst in subscription, students also have access to 'MySolidWorks' which provides online videos and tutorials, as well as training for the SOLIDWORKS certifications - a great boost for independent learning. In addition, TechSoft offers numerous SOLIDWORKS courses (see page 232).



SOLIDWORKS Certification

SOLIDWORKS provides students with powerful yet intuitive 3D Design and Simulation tools they can use to help them achieve success in their exam courses. Employers will value SOLIDWORKS experience and should students wish to formally show their competence they can take the SOLIDWORKS examinations CSWA-Academic & CSDA. The entry fee is normally £68 but with a school licence subscription, entry is free. Teachers too can formally show their competence by passing both the CSWA-Academic and TECE Examinations to gain the SOLIDWORKS Accredited Educators Certification.

CSWA-Academic Certified SOLIDWORKS Associate - Academic; CSDA Certified Sustainable Design Associate; TECE Technology Educator Competency Examination; CSWP Certified SOLIDWORKS Professional (must be CSWA-Academic qualified)

Software Information

School Licence

A School Licence for SOLIDWORKS lets up to 60 students use the package simultaneously via a network (*computers must be linked to the one server holding the licence, but there is no limit to the number of computers onto which the software can be installed*) and also provides a stand-alone licence for the teacher's use. Whilst the school licence permits you to run that version of the software forever, we advise schools to keep their School Licence Subscription up to date so that, along with the other benefits of the subscription (see below), the students can still use the software at home.

School Licence Subscription

A school licence subscription provides automatic software updates (annually), free downloadable curriculum resources, **an unlimited number of Student Standard (formerly SDK) licences and up to 60 activations of the Student Premium (formerly SEK) licenses per year.** It also provides one free entry for every student/teacher to the SOLIDWORKS examinations CSWA-Academic, CSDA and CSWP. Teachers also have free entry to the TECE examination. (Any teacher passing both the CSWA-Academic and TECE examinations is awarded the SOLIDWORKS Accredited Educator Certification.)

Minimum Hardware Requirements

2018-2019 Edition: Windows 7/8.1/10 (64-bit only)

N.B. if 32 bit is required we can supply:

2014-2015 Edition: Windows 7/8/8.1 (32 and 64-bit)

A full list of system requirements and recommendations can be found at <http://www.solidworks.com/sw/support/hardware.html>

Prices £*

*See Pricing Information on page 2

Secondary Schools & FE Colleges (see overleaf for University and Research licences)

SOLIDWORKS Education Edition* (includes 1st year subscription)

SWE-L6150 School Licence (60 networked + 1 stand-alone)

N.B. Larger licences are available - see University Licences, page 20.

Subscription Renewals* (see left for details)

SWE-LR61/3 School Licence Subscription

1 Year 3 Year

Student Standard/Premium DVDs (School Licence subscription holders only - Free download or buy to distribute)

SWE-MK5 Student Standard/Premium DVDs (pk of 5)

SWE-MK25 Student Standard/Premium DVDs (pk of 25)

* Subsidised Prices for UK Educational Establishments only

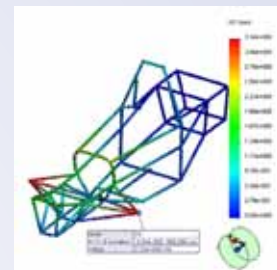
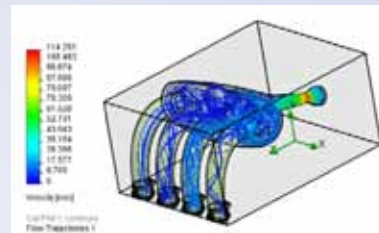
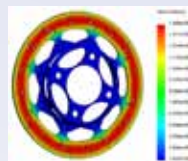
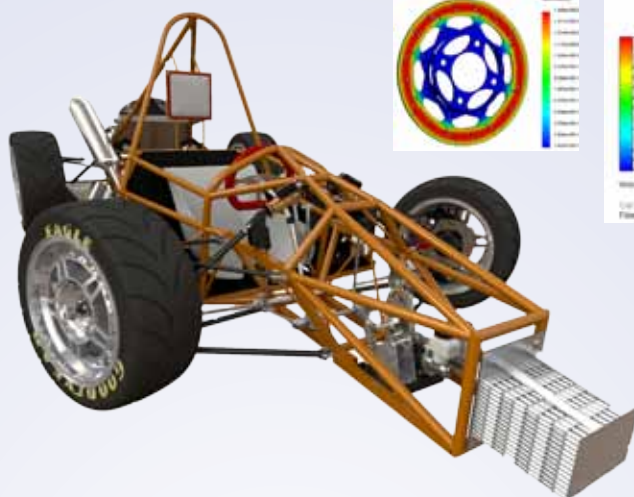
SOLIDWORKS 3D Design, Simulation & Analysis Software

SOLIDWORKS Education Edition - University and Research Licenses



SOLIDWORKS provides the ideal platform for 3D CAD at University level and is certain to meet expectations from commercial partners. A Campus Licence for SOLIDWORKS provides all the CAD functionality needed, at a competitive price and with enough options to create a bespoke solution for learning and research.

As Preferred Education Resellers, TechSoft can provide the knowledge and experience to support course leaders in guiding students towards the qualifications required in modern design & engineering disciplines.



Home Use Student Premium



A Student Premium license (formerly SEK) is a time-limited, stand-alone license for the full SOLIDWORKS Education Edition. Each year a campus licence subscription provides a number of one year Student Premium licences (activations) for use by students and lecturers on their personal laptops/home PCs. The university can distribute the software either by instructing their students to download it free of charge, or by purchasing Student Premium DVDs.

SOLIDWORKS is designed to be intuitive so the Student Premium Licences and a current subscription will be key to enabling students to develop expertise independently.

Curriculum Resources



Comprehensive, interactive tutorials are built-in to SOLIDWORKS and these are a great way to get started. Whilst in subscription, students also have access to 'MySolidWorks' which provides online videos and tutorials, as well as training for the SOLIDWORKS certifications - a great boost for independent learning. In addition, TechSoft offer numerous SOLIDWORKS courses (see page 232).

SOLIDWORKS Certification



Employers will value SOLIDWORKS experience and should students wish to formally show their competence they can take the SOLIDWORKS examinations. With a subscription, one free entry for every student/lecturer to the CSWA-Academic, CSDA, CSWSA-FEA and CSWP examinations is provided.

CSWA-Academic Certified SOLIDWORKS Associate - Academic; CSDA Certified Sustainable Design Associate; CSWSA-FEA Certified SOLIDWORKS Simulation Associate - Finite Element Analysis; CSWP Certified SOLIDWORKS Professional (must be CSWA-Academic qualified)

Software Information

Classroom, Campus and Site Packs

These packs for SOLIDWORKS Education Edition let up to 60, 200, 500 or 2000 students use the package simultaneously via a network (*computers must be linked to the one server holding the licence, but there is no limit to the number of computers onto which the software can be installed*). Whilst the licence permits you to run that version of the software forever on the network, we advise universities to keep their subscription up to date so that, along with the other benefits of the subscription (see below), the students can still use the Student Premium Licences. **Up to 60, 200, 500 or 2000 one year Student Premium (formerly SEK) licences are also provided whilst in subscription.**

Subscription

A subscription provides automatic software updates (annually), free downloadable curriculum resources, up to 60, 200, 500 or 2000 one year Student Premium (formerly SEK) licences and one free entry for each student/lecturer to the SolidWorks examinations CSWA-Academic, CSDA and CSWSA-FEA. One free entry for every CSWA-Academic qualified student/lecturer to the CSWP examination is also included.

Academic Research Licence

Unlike the Education Edition, the Academic Research Licence does not contain the educational watermark and has no restrictions for use in publications, industry-funded projects and patent applications. It is not only available to university research departments, but also to medical schools and teaching hospitals affiliated with a university. For further information contact TechSoft or see www.techsoft.co.uk/Products/Software/SolidWorksAcademicResearchersPurchasers

Minimum Hardware Requirements

2018-2019 Edition: Windows 7/8.1/10 (64-bit only)

N.B. if 32 bit is required we can supply:

2014-2015 Edition: Windows 7/8/8.1 (32 and 64-bit)

A full list of system requirements and recommendations can be found at <http://www.solidworks.com/sw/support/hardware.html>

Prices £*

*See Pricing Information on page 2

Universities & HE Colleges (see page 19 for School & FE College licences)

SOLIDWORKS Education Edition* (includes 1st year subscription)

SWE-L60	Classroom Pack (up to 60 students)
SWE-L200	Campus Pack 1 (up to 200 students)
SWE-L500	Campus Pack 2 (up to 500 students)
SWE-L2000	Site Pack (up to 2000 students)

Subscription Renewals*

	1 Year	3 Year
SWE-LR60	Classroom Pack Subscription	
SWE-LR200	Campus Pack 1 Subscription	
SWE-LR500	Campus Pack 2 Subscription	
SWE-LR2000	Site Pack Subscription	

Student Premium DVDs (School Licence Subs holders only - Free download or buy to distribute)

SWE-MK5	Student Premium DVDs (pk of 5)
SWE-MK25	Student Premium DVDs (pk of 25)

Academic Research Licence

Please contact TechSoft to discuss your specific requirements and request a quotation.

* Subsidised Prices for UK Educational Establishments only

Easy 3D Manufacturing from SOLIDWORKS, etc.

Visual Toolpath

What is Visual ToolPath?

Visual Toolpath is a 3D machining program designed specifically for the educational user. It has been conceived by TechSoft to meet the 3D manufacturing needs of students and teachers.

How does Visual ToolPath work?

Having designed your 3D masterpiece (in 3D CAD such as SOLIDWORKS) you may well want to manufacture it on your router or milling machine. To do this you need to transfer the 3D file from your design software to the Visual Toolpath software. The effective standard for 3D data transfer is the STL file format, so you simply save the file in STL format in your design software and then open it in Visual Toolpath. You then follow a simple wizard to automatically create the tool paths needed to machine the model. It really is as simple as that.

1 Orientate and Size Model

Once the STL is opened your first task is to orientate the model for machining.

2 Material Size and Margins

Next you need to set the size of material you will be using to machine your model from, and the margin around the model you wish to machine.

3 Roughing Toolpath

4 Finishing Toolpath

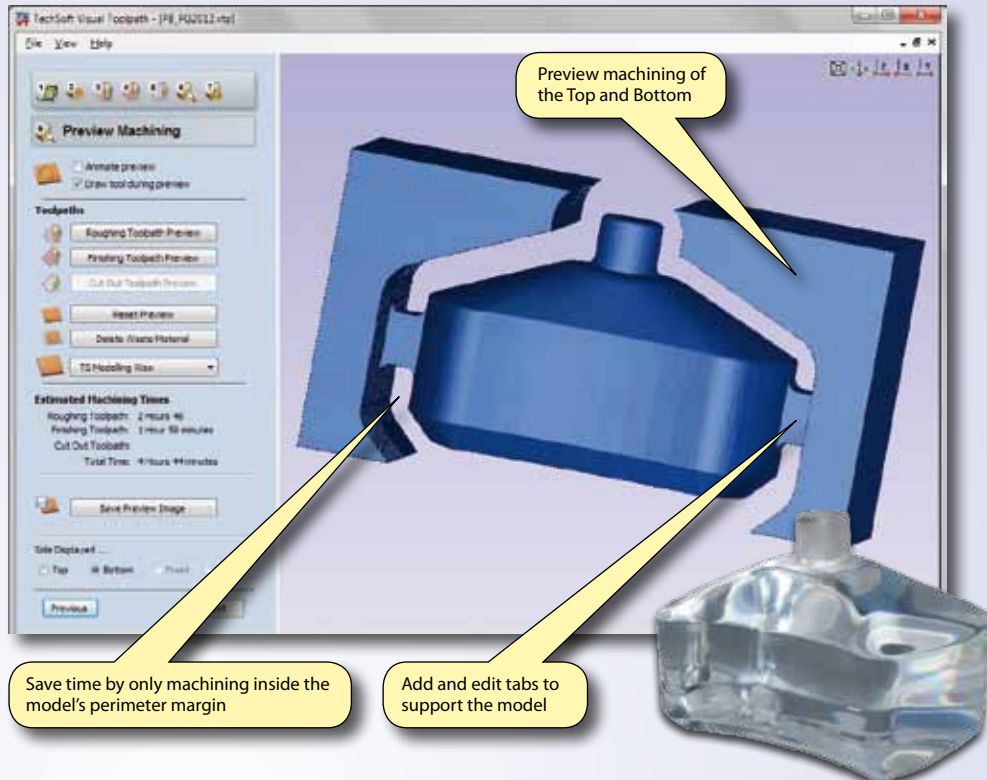
Select your tool from the Tool Database and set the toolpath direction before clicking on *Calculate* to generate the machining toolpaths.

5 Cut Out Toolpath

Although not usually needed this cut-out option can be very useful if you need to profile cut around an STL model.

6 Preview Machining

A manufacturing simulation is not only for entertainment, it can be an important part of the manufacturing process. Whilst it is possible to skip this stage if you wish, the simulation can be used to see if "silly" values have been accidentally set for depths of cut, number of passes, etc. It also allows the user to get an impression of the surface finish and the time taken. Tooling values may easily be changed and another simulation run to see the effects of the changes. This is much easier and quicker (and cheaper) than having to remake the item.



Visual Toolpath has a built-in simulation, which shows the tool movement over the model as if it is being machined.

7 Output Toolpaths

Once you are happy with the machining properties you have created, and have set up the material on the machine, you are ready to output your toolpaths.

What machines can I output to?

STL models processed in Visual Toolpath can be output directly to all Roland 3D capable miller/routers and the TechSoft RouterCAM.

How About Multi-Sided Cutting?

Some 3D objects can be machined from just one side (maybe a simple soap dish). However, many objects may need machining from 2 or more sides (maybe a bar of soap). Visual Toolpath supports either 1, 2 or 4 sided machining. This allows the use of TechSoft's self-centering vice (see page 91).



The software has in-built routines to allow the user to quickly and easily set up the software when machining with the self-centering vice. You can also easily add, and then edit, support tabs to a model. These allow it to be machined from multiple sides, whilst still being held in the block of material.

Why Buy Visual ToolPath?

Most 3D manufacturing software is very powerful but is designed for commercial use. It is not always as user friendly as you might like. Too many options and features can make the whole process complicated and confusing. Visual ToolPath has been created specifically for educational users and is designed to be both intuitive and helpful.

Software Information

Minimum Hardware Requirements

Windows 98 / Me / 2000 / XP / 2003 / Vista / 7 / 8 / 10.

Microsoft recommended minimum hardware specification advised.

Minimum screen resolution 1024 x 768.

Network compatible.

Ordering

In order to avoid software theft, the software is encrypted with the name of the licensed user, typically the name of a person, or the name of an individual establishment.

When ordering please state:

- Name of licensed user/site (max 28 characters, including spaces).
- Address for site licence.

Prices £*

*See Pricing Information on page 2

VS004	TechSoft Visual Toolpath Site Licence	
--------------	---------------------------------------	--

Buy with a Self Centering Vice and save £40.00 (see page 91)



**Fast, High Quality,
Photo Engraving Software**

What is PhotoVCarve?

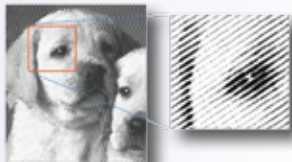
PhotoVCarve is an exciting development in the world of photo-engraving. The software allows you to create amazing engravings of photographs or other bitmap images using the V-Carve process. PhotoVCarve outputs directly to all Roland 3D capable miller/routers and the TechSoft RouterCAM range.



**Engraving Laminate
(Flexible White on Black)**

How does it Work?

A short, 'V'-pointed engraving tool is used together with laminated media that has a black coating over a white substrate. As the engraving tool works it exposes the white below. Because the tool is 'V'-pointed, the deeper you engrave, the wider the exposed white line becomes. PhotoVCarve converts bitmap images into a series of parallel toolpaths and controls depth of cut to create wider (ie., brighter) or narrower (ie., darker) white lines on the material. The effect is similar to the way newsprint uses different size black dots to create a photographic image.



What Materials Can I PhotoVCarve?

TechSoft supply a range of materials suitable for V-Carving but you could create your own. Providing the material is accurately flat, you can experiment by painting or laminating over most standard workshop material.

Can PhotoVCarve do anything else?

As well as engraving photo-images, PhotoVCarve can also be used for other techniques where depth of cut produces unique results:

3D Lithophane Machining

Lithophanes are 3D photographs that when back lit transform into stunning 3D pictures with depth and detail that cannot be seen in a flat 2D photograph.

3D Greyscale Image Machining

PhotoVCarve automatically converts a greyscale image into a 3D height map that machines as a sculpted relief panel.

Software Information

Classroom Licence

A classroom licence allows the software to be installed on up to 40 computers in one single classroom plus one teacher's laptop which may be used outside of the classroom. It must not be installed on students individual or personal laptops.

Minimum Hardware Requirements

Windows XP (SP3) / 2003 / Vista / 7 / 8 / 10.

1366 x 768 minimum graphics display.

Microsoft recommended minimum hardware specification advised.

Network compatible.

Ordering

When ordering a classroom licence the full name and address of the educational establishment must be given along with an email address belonging to the school, college or university. For single licences an email address must be provided in order to receive the software activation code.



**Innovative, Creative,
3D V-Carving Software**

What is VCarve?

VCarve allows you to create an exciting 3D carving from a simple 2D image. Routing or engraving using standard tools produces square-edged cuts of a set depth. If you want to replicate the subtlety of hand-carving for more decorative work then VCarve is an ideal and simple solution. VCarve uses a 'V'-pointed engraving tool and automatically controls depth of cut so that engraved lines can be wide (ie., deep) to give bevelled edges or increasingly narrow (ie., shallow) to give sharp edges to corners and delicate serifs for fine font engraving.



How does VCarve Work?

The software has a number of interesting design tools of its own but, at its simplest, most schools will start by importing a vector-based graphic image - 2D Design (see page 12) drawings are ideal. Areas of the design to be carved deeply are then identified and edge-treatments for where 'low' meets 'high' are selected. The machined effect can then be simulated any number of times before committing to machining.

VCarve or VCarvePro?

VCarve provides a maximum machining area of 600 x 600mm and is therefore ideal for use in schools with the Roland 3D capable millers/routers. VCarvePro offers further sophisticated options and has no maximum machining area limitation, making it ideal for the TechSoft RouterCAM range.

What Can You Do with VCarve?

VCarve designs can be added to both hand made products as well as being combined with CAD/CAM.

Moulds for casting

V-Carve the negative parts of the design in jelutong or modelling wax, to create a mould. Cast stunning jewellery pieces, badges or plaques in Precious Metal Clay (PMC, see page 130), pewter or resin.



Decorative inserts in furniture

V-Carve designs directly into wooden furniture parts or create discrete inserts for branding, personalisation or simply decorative effect.

Logos or motifs on CAD/CAM products

Refresh a tried and tested design and make project, by including VCarving as a decorative option.

Signage

Use VCarve to create 3D relief signs. Use the texture toolpath to create an even more interesting hand carved finish.

Prices £*

*See Pricing Information on page 2

Schools, Colleges & Universities Only

VS018 PhotoVCarve Classroom Licence (up to 40)

VS005 VCarve Desktop Classroom Licence (up to 40)

VS006 VCarve Pro Classroom Licence (up to 40)

General

VS014 PhotoVCarve Single Licence

VS008 VCarve Desktop Single Licence

VS009 VCarve Pro Single Licence

A laser system for your school or college will always be a major investment. The right purchasing decision will ensure the best possible technology for your students now and a sustainable investment for the long term. Before making your decision you should consider the following points carefully.

Six Points to consider when purchasing a Laser Cutter:

1

**AIR-COOLED CO₂
TUBE LIFETIME
7 YEAR AVERAGE**

There are two types of CO₂ laser tubes – water-cooled ones and air-cooled ones. All TechSoft LaserCAM machines (see pages 24-25) have **AIR-COOLED CO₂ LASER TUBES**. Although these can initially be more expensive, our experience finds that the tubes last for on average around **SEVEN YEARS** whereas the water-cooled ones (see website) will need replacing more regularly.

2

**30W AIR-COOLED
or
80W WATER-COOLED**

You will see different power ratings on the tubes. It is important to know that when comparing these a **30W AIR-COOLED** tube's performance is about the same, in terms of the materials that it will cut, as an **80W WATER-COOLED** one.

3

**2D DESIGN
OUTPUT**

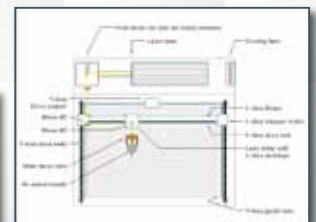
The **OUTPUT FROM 2D DESIGN** to our LaserCAM laser cutters (see pages 24-25) is **DIRECT** using *File > Print*. You are able to output both bitmap images and vectored images at the same time. There is no need to export a dxf file (vectors only) and then import into other software.



4

**ALIGNMENT OF
MIRRORS,
SERVICE AND SUPPORT**

All laser cutters work by directing and focusing a laser beam via a series of mirrors and lens onto the material to be cut. The **ALIGNMENT OF THE MIRRORS AND LENS** is critical to the successful operation of the laser, whatever type of laser cutter it is. This is a specialist job so you will need to know that the supplier of your laser cutter is able to provide **SERVICING AND SUPPORT**. At TechSoft this is our speciality.



5

**COMPLETE PACKAGE,
H&S CONSIDERATIONS**

TechSoft provide a **COMPLETE PACKAGE** including the laser cutter, a quality extraction system fully compliant with Health & Safety laws, commissioning and training.



6

TUBE WARRANTY

There is a 2 Year Warranty on all TechSoft LaserCAMs, both tube and machine. (In our experience, LaserCAM air-cooled tubes last for an average of seven years.)

Would Love a TechSoft LaserCAM but Simply Can't Afford the Initial Outlay?

Leasing is one option available for our LaserCAMs,

we also have a **range of low-cost Water-Cooled CO₂ Laser Cutters** (see website)

Please visit our website for more information:
www.techsoft.co.uk/lasercutters

Laser Cutting / Engraving



High Specification Laser Cutters and Engravers

Why Invest in a LaserCAM System?

Lasers are about the simplest way possible to get from CAD drawing to finished product. They work with extraordinary accuracy and delicacy, are quick to produce results, and the finished edge is usually just that - finished. With a few important exceptions, lasers will cut and engrave a huge variety of materials, so just about every area of Design and Technology is able to get the benefit. LaserCAM is, essentially, a 2D machine so it will find its place alongside milling and knife cutting machines, to give students a realistic experience of real-world practice, and to give them the right mix of tools for specific applications.



LaserCAM is the only laser cutting & engraving machine with guaranteed direct output from 2D Design V2

The TechSoft Advantage

TechSoft have an exclusive arrangement to supply LaserCAM to the UK Education and we work closely with the manufacturers to ensure that the machines meet all necessary standards for price, safety and quality. TechSoft have developed features in 2D Design V2 to make output direct and seamless - LaserCAM is the only laser cutting and engraving machine on the market to have this 'designed-in' compatibility. TechSoft will install your machine, provide training, and be your first point of contact in case of a problem, so any issues will be dealt with quickly. We are proud of our reputation for excellent customer service and person-to-person contact is an important feature of this. In addition, you will have unlimited access to technical support by phone or email.

So What Can I Cut With a LaserCAM?

Apart from metals and vinyls, most workshop plastics, textiles and graphic materials are fine. Some timber products give inconsistent results due to density, or the resins used in manufacture. There's no harm in experimenting with 'stock' material but for reliable results TechSoft supply laser-quality plywood and MDF in a range of thicknesses. Suitable material up to 12 - 15mm thick will cut well and the power of the laser will largely dictate speed of cut rather than ultimate depth. It is difficult to compare cutting speeds 'on paper' between different models of laser cutter. Suffice to say that LaserCAMs are among the most capable in their class.

Buy with Confidence

A TechSoft LaserCAM package is supplied and installed with everything you need so laser cutting and engraving can start right away. TechSoft have been supplying LaserCAM to schools for over twelve years and remain committed to providing the best technology and the highest level of service needed to secure your investment for the long term.



LaserCAM A3+



A compact machine where the extraction system doubles as a wheeled base unit - ideal if the machine has to be shared between rooms, or if space is really tight.

Specification

Laser Power: 30W
 Axis Travel: 450 x 310 x 150mm
 Max. Head Speed: 1524mm/sec
 Max. Resolution: 1000dpi
 Focus: Auto
 Positioning: Red beam pointer
 Interface: USB
 Weight: 70 kg (LaserCAM only)
 60 kg (Extractor only)
 Dimensions: 690(W)x900(D)x895(H)mm
 (including extraction unit)
 Extractor: TMA-EXT3
 Extractor On/Off: Auto-switching and auto over-run for extraction/air-assist.

LaserCAM A2+



Ideal for Education

For most schools, this machine offers the ideal balance between work area, cost and space needed in the workshop or studio. 30W of laser power will do everything you ask of it - 60W will do it much faster.

Specification

Laser Power: 30 or 60 W
 Axis Travel: 660 x 495 x 210mm
 Max. Head Speed: 1524mm/sec
 Max. Resolution: 1000dpi
 Focus: Auto
 Positioning: Red beam pointer
 Interface: USB
 Weight: 180 kg (LaserCAM only)
 70 kg (Extractor only)
 Dimensions: 960(W)x890(D)x1020(H)mm
 (NOT including extraction unit)
 Extractor: TMA-EXT1B
 Extractor On/Off: Auto-switching and auto over-run for extraction/air-assist.

LaserCAM A1+



A compact package for large scale work, the A1+ machine features advanced optical systems to ensure consistent performance across the work area. 60W or 100W laser power will clearly be an advantage to achieve maximum throughput for large projects.

Specification

Laser Power: 30, 60 or 100W
 Axis Travel: 1000 x 600 x 230mm
 Max. Head Speed: 1524mm/sec
 Max. Resolution: 1000dpi
 Focus: Auto
 Positioning: Red beam pointer
 Interface: USB
 Weight: 259 kg (LaserCAM only)
 70 kg (Extractor only)
 Dimensions: 1450(W)x820(D)x1064(H)mm
 (NOT including extraction unit)
 Extractor: TMA-EXT1
 Extractor On/Off: Auto-switching and auto over-run for extraction/air-assist.

Optional Extra - Rotary Attachment

A Rotary Attachment is the only accessory you might want in addition to the standard LaserCAM package. We have written an extra dialog box into 2D Design to make it simple to set the design area of your cylindrical shape. To output, just tick the 'Use Rotary' option. A Rotary Table adds a new dimension to laser work allowing great scope for lighting, jewellery and decorative project work - we think its well worth having.



What's Included in Each Package

Complete Extraction System

High capacity, auto-switching extraction unit with integral air-assist compressor. Self-regulating for optimum flow rate. LCD display to monitor filter condition.

Free Education Training Pack 11977

The Training Pack gives you everything you need to reinforce the training provided on installation and to have the machine earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through a series of projects that illustrate the full potential of the machine.



Commissioning & Training

The cost of the LaserCAM also includes commissioning and training on the same day.

Warranty

UK Mainland & Ireland: 2 Year On-Site
 Elsewhere: 2 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MP-LCA3P-30NR	LaserCAM A3+ 30W Package <i>Includes machine, extractor, training pk, commissioning & training</i>
MP-LCA2P-30NR	LaserCAM A2+ 30W Package <i>Includes machine, extractor, training pk, commissioning & training</i>
MP-LCA2P-60NR	LaserCAM A2+ 60W Package <i>Includes machine, extractor, training pk, commissioning & training</i>
MP-LCA1P-30NR	LaserCAM A1+ 30W Package <i>Includes machine, extractor, training pk, commissioning & training</i>
MP-LCA1P-60NR	LaserCAM A1+ 60W Package <i>Includes machine, extractor, training pk, commissioning & training</i>
MP-LCA1P-100NR	LaserCAM A1+ 100W Package <i>Includes machine, extractor, training pk, commissioning & training</i>

Optional Extra

TMA-LC-R	Rotary Attachment for LaserCAM <i>(Please state model when ordering)</i>
-----------------	---

Recommended Materials

See details of these packs on page 29, and a full range of materials on pages 26 - 29

TPM5-LC3	Mixed Materials Pack for A3+ <i>(Save £15)</i>
TPM5-LC2	Mixed Materials Pack for A2+ <i>(Save £20)</i>
TPM5-LC1	Mixed Materials Pack for A1+ <i>(Save £25)</i>

Recommended Software

2D Design V2 (page 12)

For alternative low cost water-cooled CO₂ laser cutters see www.techsoft.co.uk/lasers

Laser Cutting / Engraving

Extraction & Consumables

Extraction Filters

The extraction system supplied with a laser will need replacement filters. Although estimates of life expectancy can be given, filter life very much depends on what type of materials are cut and, obviously, how often the system is run. We recommend changing the main filter annually and the pre-filter every 6 months regardless of their apparent effectiveness.

For EXT1/EXT1B/EXT1X/EXT1BX

TMP-LAS-EXT1PF	Labyrinth pre-filter for EXT1	
TMP-LAS-EXT1PF-2	Pack of 2 Labyrinth pre-filters for EXT1	
TMP-LAS-EXT1CF	Main fume and fine particulate filter for EXT1	

For EXT2

TMP-LAS-EXT3PF	Labyrinth pre-filter for EXT2	
TMP-LAS-EXT3PF-2	Pack of 2 Labyrinth pre-filters for EXT2	
TMP-LAS-EXT1CF	Main fume and fine particulate filter for EXT2	

For EXT3

TMP-LAS-EXT3PF	Labyrinth pre-filter for EXT3	
TMP-LAS-EXT3PF-2	Pack of 2 Labyrinth pre-filters for EXT3	
TMP-LAS-EXT1CF	Main fume and fine particulate filter for EXT3	

For AD400LT/E/+ Serial Nos 1-16 only

TMP-LAS-400PF1	Deep pleat pre-filter (A1030046). 75mm inlet for use with machines with serial numbers 1-16.	
TMP-LAS-400CF1	Main fume & fine particulate filter (A1030050). For use with machines with serial numbers 1-16.	

For AD400LT/E/+ Serial Nos 17-209 only

TMP-LAS-400PF	Deep pleat pre-filter (A1030045). 50mm inlet for use with machines with serial numbers 17-209.	
TMP-LAS-400CF	Main fume and fine particulate filter (A1030049). For use with machines with serial numbers 17-209.	

For AD400LT/E/+ Serial Nos 210-261 only

TMP-LAS-400PF	Deep pleat pre-filter (A1030045). 50mm inlet for use with machines with serial numbers 210-261.	
TMP-LAS-400CF1	Main fume and fine particulate filter (A1030050). For use with machines with serial numbers 210-261.	

For AD400LT/E/+ Serial Nos 262 onwards

TMP-LAS-400PF1	Deep pleat pre-filter (A1030046). 75mm inlet for use with machines with serial number 262 onwards.	
TMP-LAS-400CF1	Main fume and fine particulate filter (A1030050). For use with machines with serial number 262 onwards.	

For L350

TMP-LAS-350PF	Pack of pre-filters for L350	
TMP-LAS-350CF	Main fume and fine particulate filter for L350	

For L700

TMP-LAS-700PF	Bag pre-filter for L700	
TMP-LAS-700CF	Main fume and fine particulate filter for L700	

Cleaning Kits



TMP-LAS-CLEANKIT	TechSoft LaserCAM Cleaning Kit. Includes key, lens key, lens cloth, soft cloth, safe buds, gloves.	
TA-HEXTOOL25	2.5mm Hex Tool for adaptor adjustment	
TMS-LAS-LENSKEY	Lens key	
TMS-LAS-CLOTHL	Lens cleaning cloth	
TMS-LAS-CLOTHS	Soft Cloth - Microfibre	
TMS-LAS-SAFEBUDS	Pack of 100 safebuds	
TMS-LAS-GLOVES	100 Medium Vinyl Glove	
TMS-LAS-WIPES	25 Engineers Cleaning Wipes	

Extraction Unit Upgrades

Existing LaserCAM customers may wish to consider purchasing our latest extractor models to benefit from the higher specification.

TMA-EXT3	LaserCAM Extractor EXT3 for A3+/A3	
TMA-EXT1BX	LaserCAM Extractor EXT1B for A2+/A2	
TMA-EXT1X	LaserCAM Extractor EXT1 for A1+	

CO₂ Laser Tubes

As with all lasers, the laser tube itself is a consumable part which will not last forever. LaserCAM machines are supplied with a 2 year laser tube warranty, but the warranty can be extended (see below).

Extended Laser Tube Warranty

WR-LAS-TB30S	*1 year extended warranty for 30W tube	
WR-LAS-TB55D	*1 year extended warranty for 55W tube	
WR-LAS-TB60S	*1 year extended warranty for 60W tube	

* Available only whilst the laser tube is within warranty.

Replacement Laser Tubes

Replacement/Exchange laser tubes come with a one year warranty. There are two manufacturers of tubes, Deos and Synrad. All 30W LaserCAMs purchased before 20th Nov 2008 were fitted with Deos tubes, those after with Synrad tubes. All 55W LaserCAMs are fitted with DEOS tubes, all 60W LaserCAMs are fitted with Synrad tubes. A Synrad tube can only be replaced (exchanged) if it is less than five years old. Current replacement costs (including fitting) are:

TMP-LAS-EXCHANGE30D	Replacement 30W Deos Tube	
TMP-LAS-EXCHANGE55D	Replacement 55W Deos Tube	
TMP-LAS-EXCHANGE30S	Replacement 30W Synrad Tube	
TMP-LAS-EXCHANGE60S	Replacement 60W Synrad Tube	

New Laser Tubes

New laser tubes come with a two year warranty. Costs including fitting are:

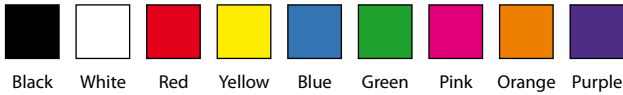
TMP-LAS-NEWTUBE30D	New 30W Deos Tube	
TMP-LAS-NEWTUBE55D	New 55W Deos Tube	
TMP-LAS-NEWTUBE30S	New 30W Synrad Tube	
TMP-LAS-NEWTUBE60S	New 60W Synrad Tube	

Coloured & Clear Cast Acrylic



Cast acrylic gives best results for laser cutting and engraving and is also suitable for milling and engraving.

Colours: Clear, Black, White, Red, Yellow, Blue, Green, Pink, Orange and Purple.



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

Nominal Size: 1000 x 600mm (for LaserCAM A1+)

Solid Coloured:

TAAC1-R3-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (1000 x 600 x 3mm) One of each colour	
TAAC1-R5-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (1000 x 600 x 5mm) One of each colour	
TCAC1-R3-COL*	Coloured Acrylic sheet (1000 x 600 x 3mm)	
TCAC1-R5-COL*	Coloured Acrylic sheet (1000 x 600 x 5mm)	

Clear:

TCAC1-C3	Clear Acrylic Sheet (1000 x 600 x 3mm)	
TCAC1-C5	Clear Acrylic Sheet (1000 x 600 x 5mm)	
TCAC1-C10	Clear Acrylic Sheet (1000 x 600 x 10mm)	
TCAC1-C15	Clear Acrylic Sheet (1000 x 600 x 15mm)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

Solid Coloured:

TAAC2-R3-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (600 x 400 x 3mm) One of each colour	
TAAC2-R5-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (600 x 400 x 5mm) One of each colour	
TCAC2-R3-COL*	Coloured Acrylic Sheet (600 x 400 x 3mm)	
TCAC2-R5-COL*	Coloured Acrylic Sheet (600 x 400 x 5mm)	

Clear:

TCAC2-C3	Clear Acrylic Sheet (600 x 400 x 3mm)	
TCAC2-C5	Clear Acrylic Sheet (600 x 400 x 5mm)	
TCAC2-C10	Clear Acrylic Sheet (600 x 400 x 10mm)	
TCAC2-C15	Clear Acrylic Sheet (600 x 400 x 15mm)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

Solid Coloured:

TAAC3-R3-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (410 x 280 x 3mm) One of each colour	
TAAC3-R5-9-P1	Mixed pack of 9 Coloured Acrylic Sheets (410 x 280 x 5mm) One of each colour	
TCAC3-R3-COL*	Coloured Acrylic Sheet (410 x 280 x 3mm)	
TCAC3-R5-COL*	Coloured Acrylic Sheet (410 x 280 x 5mm)	

Clear:

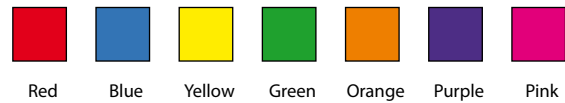
TAAC3-C3-5	Pack of 5 Clear Acrylic Sheets (410 x 280 x 3mm)	
TAAC3-C5-5	Pack of 5 Clear Acrylic Sheets (410 x 280 x 5mm)	
TCAC3-C10	Clear Acrylic Sheet (410 x 280 x 10mm)	
TCAC3-C15	Clear Acrylic Sheet (410 x 280 x 15mm)	

Fluorescent Transparent Acrylic



Light-gathering for fantastic 'live edge' effects. Suitable for laser cutting and engraving or milling.

Colours: Red, Blue, Yellow, Green, Orange, Purple, Pink.



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

Nominal Size: 1000 x 600mm (for LaserCAM A1+)

TAAC1-F3-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (1000 x 600 x 3mm) One of each colour	
TAAC1-F5-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (1000 x 600 x 5mm) One of each colour	
TCAC1-F3-COL*	Fluorescent Transparent Acrylic Sheet (1000 x 600 x 3mm)	
TCAC1-F5-COL*	Fluorescent Transparent Acrylic Sheet (1000 x 600 x 5mm)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

TAAC2-F3-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (600 x 400 x 3mm) One of each colour	
TAAC2-F5-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (600 x 400 x 5mm) One of each colour	
TCAC2-F3-COL*	Fluorescent Transparent Acrylic Sheet (600 x 400 x 3mm)	
TCAC2-F5-COL*	Fluorescent Transparent Acrylic Sheet (600 x 400 x 5mm)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

TAAC3-F3-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (410 x 280 x 3mm) One of each colour	
TAAC3-F5-7-P1	Mixed pack of 7 Fluorescent Transparent Acrylic Sheets (410 x 280 x 5mm) One of each colour	
TCAC3-F3-COL*	Fluorescent Transparent Acrylic Sheet (410 x 280 x 3mm)	
TCAC3-F5-COL*	Fluorescent Transparent Acrylic Sheet (410 x 280 x 5mm)	

N.B. Colours shown are only an indication and all sheet sizes are nominal.

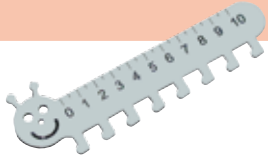
Laser Cutting / Engraving

Materials

Laser Engraving Laminates

Laser engraving laminate is similar in appearance to that used for rotary engraving, but is composed of different materials more suitable for laser marking and cutting.

It is ideal for a range of quick and simple CNC projects such as badges, key fobs, tags, panels, etc. This really is a fantastic medium for students' design work.



Standard Colours:

S1 Red on White	S2 Blue on White	S3 Green on White	S4 Black on White	S5 White on Black	S6 White on Blue
S7 White on Red	S8 Yellow on Black	S9 Grey on White	S10 Walnut on White	S11 Black on Gold	

Metallic Finishes:

E12 Gold on Black	E13 Brushed Copper on Black	E14 Brushed Aluminium on Black	M1 Brushed Silver on Black	M2 Brushed Gold on Black	M3 Black on Gold
-----------------------------	---------------------------------------	--	--------------------------------------	------------------------------------	----------------------------

Magnetic Colours:

* When ordering, where COL is included in the order code, please change this to indicate the actual colour required from the charts above.

Nominal size: 800 x 600mm (for LaserCAM A1+)

TAL1-SCOL*	1 Standard Colour Laminate (800 x 600 x 1.3mm)	
TAL1-ECOL*	1 Metallic Finish Laminate (800 x 600 x 1.5mm)	

Nominal size: 600 x 400mm (for LaserCAM A2+/A2)

TAL2-P1	Mixed pack of 11 Standard Colour Laminate (600 x 400 x 1.3mm) One of each S colour	
TAL2-SCOL*	Standard Colour Laminate (600 x 400 x 1.3mm)	
TAL2-P2	Mixed pack of 3 Metallic Finish Laminate (600 x 400 x 1.5mm) One of each E colour	
TAL2-ECOL*	Metallic Finish Laminate (600 x 400 x 1.5mm)	

Nominal size: 400 x 280mm (for LaserCAM A3+/A3)

TAL3-P1	Mixed pack of 11 Standard Colour Laminate (400 x 280 x 1.3mm) One of each S colour	
TAL3-SCOL*	Standard S Colour Laminate (400 x 280 x 1.3mm)	
TAL3-P2	Pack of 3 Metallic Finish Laminate (400 x 280 x 1.5mm) One of each E colour	
TAL3-ECOL*	Metallic Finish E Colour Laminate (400 x 280 x 1.5mm)	

TechSoft also stock magnetic laser engraving laminates which are ideal for creating fridge magnets and other magnetic graphic products.

Nominal size: 610 x 305mm (for LaserCAM A1+/A2+/A2)

TAL-MCOL*	Magnetic Finish Laminate (610 x 305 x 0.5mm)	
------------------	--	--

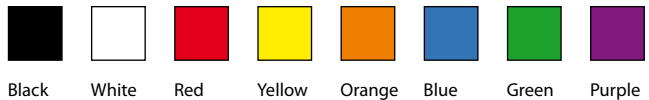
Nominal size: 300 x 280mm (for LaserCAM A3+/A3)

TAL3-P3	Mixed pack of 3 Magnetic Laminate (300 x 280 x 0.5mm) One of each M colour	
TAL3-MCOL*	Magnetic M Colour Laminate (300 x 280 x 0.5mm)	

Plastazote



Plastazote is a flexible closed-cell polyethylene foam that is chemically inert and non-irritant. Unlike other foams, it has a 'sealed' non-absorbent surface and is stiff enough to make safe toys, puzzles and 'fancy dress' items for the most boisterous of children (and grown-ups!) It is widely used for impact absorbing sports-wear products and, in medicine, for padding splints and injury supports. Other uses include insulation, sealing and packaging. Plastazote can be thermo-formed and laser cuts easily, safely and cleanly.



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

Nominal Size: 1000 x 600mm (for LaserCAM A1+)

TAPZ1-4-P1	Mixed pack of 8 Plastazote sheets (1000 x 600 x 4mm) One of each colour	
TCPZ1-4-COL*	Plastazote sheet (1000 x 600 x 4mm)	
TAPZ1-8-P1	Mixed pack of 8 Plastazote sheets (1000 x 600 x 8mm) One of each colour	
TCPZ1-8-COL*	Plastazote sheet (1000 x 600 x 8mm)	
TAPZ1-12-P1	Mixed pack of 8 Plastazote sheets (1000 x 600 x 12mm) One of each colour	
TCPZ1-12-COL*	Plastazote sheet (1000 x 600 x 12mm)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

TAPZ2-4-P1	Mixed pack of 8 Plastazote sheets (600 x 400 x 4mm) One of each colour	
TCPZ2-4-COL*	Plastazote sheet (600 x 400 x 4mm)	
TAPZ2-8-P1	Mixed pack of 8 Plastazote sheets (600 x 400 x 8mm) One of each colour	
TCPZ2-8-COL*	Plastazote sheet (600 x 400 x 8mm)	
TAPZ2-12-P1	Mixed pack of 8 Plastazote sheets (600 x 400 x 12mm) One of each colour	
TCPZ2-12-COL*	Plastazote sheet (600 x 400 x 12mm)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

TAPZ3-4-P1	Mixed pack of 8 Plastazote sheets (410 x 280 x 4mm) One of each colour	
TCPZ3-4-COL*	Plastazote sheets (410 x 280 x 4mm)	
TAPZ3-8-P1	Mixed pack of 8 Plastazote sheets (410 x 280 x 8mm) One of each colour	
TCPZ3-8-COL*	Plastazote sheet (410 x 280 x 8mm)	
TAPZ3-12-P1	Mixed pack of 8 Plastazote sheets (410 x 280 x 12mm) One of each colour	
TCPZ3-12-COL*	Plastazote sheets (410 x 280 x 12mm)	

N.B. Colours shown are only an indication and all sheet sizes are nominal.

Polypropylene Sheets

800 micron polypropylene sheets can be laser cut and scored to create interesting products including packaging. Its flexible property, and the fact that it can be riveted and eyeletted, means that really creative work can be produced.



11 colours are available - Black, Sky Blue, Clear Frosted, Dark Blue, Dark Green, Green, Orange, Purple, Red, White and Yellow.

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

Nominal Size: 1000 x 600mm (for LaserCAM A1+)

TAPP81-P2	Pack of 11 Polypropylene Sheets (1000 x 600mm, 750/800 mic). One of each colour	
TCPP81-COL*	Polypropylene Sheet (1000 x 600mm, 750/800mic)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

TAPP82-P2	Pack of 11 Polypropylene Sheets (600 x 400mm, 750/800 mic). One of each colour	
TCPP82-COL*	Polypropylene Sheet (600 x 400mm, 750/800 mic)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

TAPP83-P2	Pack of 11 Polypropylene Sheets (410 x 280mm, 750/800 mic). One of each colour	
TCPP83-COL*	Polypropylene Sheet (410 x 280mm, 750/800 mic)	

Medite (Laser Grade MDF)

Different types of MDF vary greatly in composition and this can have a dramatic effect on how they laser cut. Medite is the best type of MDF for laser cutting and so we now stock this often hard to source material.



Medite chair with black spray paint finish

Nominal Size: 1000 x 600mm (for LaserCAM A1+)

TC-MED41	Medite Sheet (1000 x 600 x 4mm)	
TC-MED61	Medite Sheet (1000 x 600 x 6mm)	
TC-MED91	Medite Sheet (1000 x 600 x 9mm)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

TA-MED42-10	Pack of 10 Medite Sheets (600 x 400 x 4mm)	
TA-MED62-10	Pack of 10 Medite Sheets (600 x 400 x 6mm)	
TA-MED92-10	Pack of 10 Medite Sheets (600 x 400 x 9mm)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

TA-MED43-10	Pack of 10 Medite Sheets (410 x 280 x 4mm)	
TA-MED63-10	Pack of 10 Medite Sheets (410 x 280 x 6mm)	
TA-MED93-10	Pack of 10 Medite Sheets (410 x 280 x 9mm)	

Flexible Veneer

TA-VENPK3	Mixed Pack of 5 Flexiveneer Sheets 480mm x 300mm (ideal for laser cutting)	
------------------	--	--

Laser Grade Birch Plywood

TechSoft stock high quality 4mm, 6mm and 9mm birch plywood which is manufactured specifically for laser cutting. Its edge finish when cut is a golden brown colour, unlike the black charred finish of standard ply. Another advantage of this laser grade ply is that the core material is the same quality as the outside sheets - giving a better cut edge with greater stability (N.B. 9mm ply may require 2 passes on a 30W laser).



Nominal Size: 900 x 600mm (for LaserCAM A1+)

TA-PLYB41-10	Pack of 10 Laser Grade Birch Ply Sheets (900 x 600 x 4mm)	
TA-PLYB61-10	Pack of 10 Laser Grade Birch Ply Sheets (900 x 600 x 6mm)	
TC-PLYB91	Laser Grade Birch Ply Sheet (900 x 600 x 9mm)	

Nominal Size: 600 x 400mm (for LaserCAM A2+/A2)

TA-PLYB42-10	Pack of 10 Laser Grade Birch Ply Sheets (600 x 400 x 4mm)	
TA-PLYB62-10	Pack of 10 Laser Grade Birch Ply Sheets (600 x 400 x 6mm)	
TC-PLYB92	Laser Grade Birch Ply Sheet (600 x 400 x 9mm)	

Nominal Size: 410 x 280mm (for LaserCAM A3+/A3)

TA-PLYB43-10	Pack of 10 Laser Grade Birch Ply Sheets (410 x 280 x 4mm)	
TA-PLYB63-10	Pack of 10 Laser Grade Birch Ply Sheets (410 x 280 x 6mm)	
TC-PLYB93	Laser Grade Birch Ply Sheet (410 x 280 x 9mm)	

N.B. The nominal thickness of this material is 4mm, 6mm or 9mm, but this may vary from 3-4mm, 5-6mm and 8-9mm between batches, due to the sanding process.

Laser Grade Italian Poplar Plywood

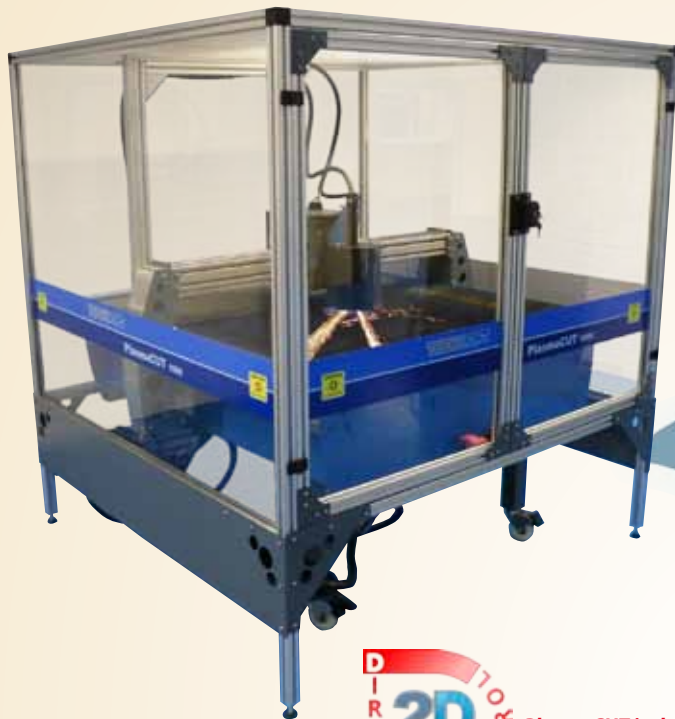
In addition to the birch plywood, TechSoft also stock a lightweight laser grade Italian Poplar plywood which is ideal for use when faster machining times are important. For more details see our website at <http://www.techsoft.co.uk/Products/LaserCuttingMaterials/LaserGradePlywood>

Material Packs

These packs have been created by popular demand to take the hassle out of ordering, and to give a modest cost saving overall. Each pack contains a generous selection of materials particularly suited for the size of LaserCAM listed. Ideal as a basic stock, for back-up and for developing projects using different materials.

TPM5-LC3	Mixed Materials Pack for LaserCAM A3+/A3 (Save £15) Includes 3 sheets laser engraving laminate (2 standard, 1 metallic); 11 sheets polypropylene; 5 sheets 4mm laser grade ply; 5 sheets 4mm medite; 17 sheets 3mm acrylic (9 colour, 1 clear, 7 transparent); 10 sheets 5mm acrylic (9 colour, 1 clear); 8 sheets 4mm plastazote; 2 sheets 12mm plastazote. All sheets 410 x 280mm (400 x 280mm for engraving laminate). Mixed colours.	
TPM5-LC2	Mixed Materials Pack for LaserCAM A2+/A2 (Save £20) Includes 3 sheets laser engraving laminate (2 standard, 1 metallic); 11 sheets polypropylene; 5 sheets 4mm laser grade ply; 5 sheets 4mm medite; 17 sheets 3mm acrylic (9 colour, 1 clear, 7 transparent); 10 sheets 5mm acrylic (9 colour, 1 clear); 8 sheets 4mm plastazote; 2 sheets 12mm plastazote. All sheets 600 x 400mm. Mixed colours.	
TPM5-LC1	Mixed Materials Pack for LaserCAM A1+ (Save £25) Includes 3 sheets laser engraving laminate (2 standard, 1 metallic); 11 sheets polypropylene; 5 sheets 4mm laser grade ply; 5 sheets 4mm medite; 17 sheets 3mm acrylic (9 colour, 1 clear, 7 transparent); 8 sheets 4mm plastazote; 2 sheets 12mm plastazote. All sheets 1000 x 600mm (800 x 600mm for engraving laminate, 900 x 600mm for laser grade ply). Mixed colours.	

Plasma Cutting



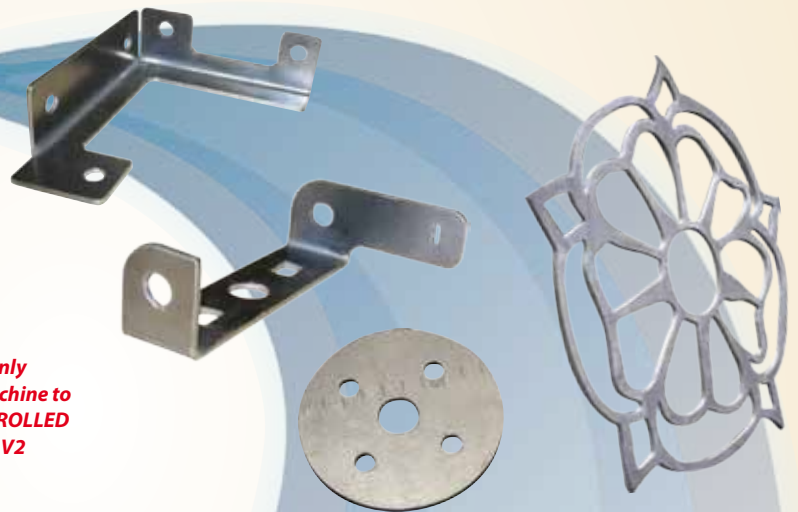
PlasmaCUT is the only plasma-cutting machine to be DIRECTLY CONTROLLED through 2D Design V2

Large, High Speed, Cutting Machine for Mild Steel

What is PlasmaCUT?

Lasers have made a huge impact on student project work but we are often asked "Why can't they be used to cut metals?" In industry, lasers are used routinely for metal-cutting, but high costs and significant risk management issues make the technology unsuitable for educational use – at least at the moment! To meet the need for metal profiling in education, TechSoft are delighted to introduce PlasmaCUT.

PlasmaCUT gives you all the simplicity and speed of laser cutting but without the cost and safety problems associated with high power metal-cutting lasers. PlasmaCUT is a high speed profiling machine that works from 2D CAD files generated in 2D Design V2. Output routine is much the same as any TechSoft machine, but now you can slice your way through mild steel, up to 12mm thick, with no more hassle than it took to slice through card on a CAMM 1.



Safety First and Last

Safety is paramount of course and cutting mild steel has a few more concerns than card-cutting. PlasmaCUT is UK-built and CE marked to meet exacting EU regulations for Health and Safety, and TechSoft have worked closely with the manufacturers to take things even further. The PlasmaCUT 1000 machine is housed in an interlocked protective enclosure to contain stray sparks and particles. For both models there is an integral down-draft fume table and this connects to a high-efficiency extraction system which captures airborne particulates. The extraction unit filters and completely cleans the waste so that it can be safely exhausted internally. PlasmaCUT is not a machine for a regular classroom or design studio, but will fit into any workshop space where there are the usual provisions for hot metal working.

Why invest in a PlasmaCUT?

Engineering departments and specialist engineering schools will clearly be interested in the potential PlasmaCUT has to bring sheet metal cutting up to date with industry-standard CAD/CAM techniques. More widely, many Design and Technology departments have found metalworking quite difficult to incorporate into schemes of work in recent years. PlasmaCUT will fit naturally alongside other CAD/CAM and 'benchwork' techniques, and has the power to revolutionise what students are able to do in their project work.

The TechSoft Advantage

TechSoft's unrivalled knowledge and experience mean that these machines are not simply compatible with, but have been optimised for the UK education market. We are proud of our reputation for excellent customer service and our close liaison with the UK manufacturers means you will have access to unlimited technical support should you need it. If you know how to operate one TechSoft machine you will be well on your way to using PlasmaCUT.



N.B. The Plasma cut table has a laser cut/engraved acrylic top.

The Technology Explained

We are used to three energy states for materials - solid, liquid or gas. Plasma is a fourth state where energy levels are raised further, and gas molecules break into free electrons and positive ions. When these particles collide, enormous energy is released and this is the basis of a Plasma beam. PlasmaCUT uses an inverter-driven plasma torch which creates the beam by forming an electrical arc in a high-velocity, highly focussed jet of compressed air, and it is this which so easily pierces mild steel sheet.

The main chassis of PlasmaCUT is built from precision-cut steel for rigidity, with aluminium being used where possible for the motion system. By keeping mass low, the motion system can accelerate rapidly which results in accurate hole-cutting and clean corners. The plasma torch is held on a pneumatically-operated cutter post which gently presses onto the work with five rollerball units; this ensures the torch is consistently held at the right height for clean cutting and easy starting.

PlasmaCUT has its own PC-based controller accessed through a 15" LCD touch screen. This is used to import files from 2D Design V2 ready to machine.

Commissioning, Training and Maintenance

PlasmaCUT machines are commissioned on-site by trained engineers who will remain for as long as necessary to ensure teaching and technician staff are happy with all operation, safety and maintenance issues. Maintenance is largely a matter of 'housekeeping' - the fume table will need to be cleared of off-cuts and dust from time to time, and bearing surfaces and slides will need to be wiped clean. The compressor and extraction system will also need monitoring to check that connections are good and filters are serviceable.

What About Running Costs?

Using a PlasmaCUT is unlikely to have a significant impact on energy costs in most schools. The plasma torch will last indefinitely, but the torch electrode and tip will need replacing after about 500 piercings. Replacements are not expensive and an annual budget of a few hundred pounds should be more than enough to keep a PlasmaCUT going in a busy department.

Only for Mild Steel?

Emphatically - yes! Plasma torches will cut a vast range of materials but the waste products will include metal powders and oxides. Mix them together and you have the basis of Thermite - an extremely dangerous, potentially explosive, compound. **For this reason, it is extremely important that PlasmaCUT is used exclusively for mild steel.**

TECHSOFT

What's Included

Accessories

- Fully Interlocked Safety Case (*PlasmaCUT 1000 only*)
- Mobile Extractor 12686
- Air Compressor 00091
- PC-based controller
- 15" Interactive touch screen LCD display controller
- Driver software - shows real time display of job progress

Commissioning & Training

The cost of the PlasmaCUT also includes commissioning and training on the same day.

Warranty

UK Mainland & Ireland: 2 Year On-Site
Elsewhere: 2 Year Return and Collect

The 2 year warranty covers all electrical and mechanical systems and the plasma torch, but not the torch electrode and nozzles which are deemed 'consumable'.

PlasmaCUT 1000/2000



Specification	PlasmaCUT 1000	PlasmaCUT 2000
Plasma-Cutting Torch:	Thermal Dynamics Cutmaster A10	
Piercing Thickness:	Up to 12mm mild steel	
Power Output:	20-60A	
Axis Travel:	1000 x 1000mm	2000 x 1000mm
Max Head Speed:	267mm/sec (16,000mm/min)	
Interface (to PC Controller):	USB or Ethernet	
Dimensions (mm):	1680(W) x 1600(D) x 1780(H) <small>(including safety case)</small>	1520(W) x 2500(D) x 1780(H) <small>(no safety case)</small>
Overall Footprint: <small>(PlasmaCUT, Controller, Extractor & Air Compressor)</small>	2660(W) x 2116(D)mm	2500(W) x 2420(D)mm
Power Requirements:	415V 3ph @ 32A (PlasmaCUT) 2 x 240V 1ph @ 13A (Compressor & Computer) 240V 1ph @ 16A (Extraction)	

Prices £*

*See Pricing Information on page 2

Machine Packages

MP6-PC-1T	PlasmaCUT 1000 Package <i>Includes safety case, extractor (worth £2,150), air compressor (worth £675), commissioning and training</i>	
MP6-PC-2T	PlasmaCUT 2000 Package <i>Includes extractor (worth £2,150), air compressor (worth £675), commissioning and training</i>	

Consumable Parts

TMP-PC-TIP40A	40A Tip for PlasmaCUT	
TMP-PC-ELECTRODE	Torch Electrode	
TMP-PC-BED20	20 Bed Strips (<i>1215 x 55 x 1mm steel</i>)	
TMP-PC-OIL1	Alt-air piston oil, 1 litre (<i>for Compressor</i>)	
TC-PC-GLOVE1	Pair of Welding Gauntlets	

Mild Steel Sheets

TAMS1-P1	5 sheets 1000 x 1000mm Mild Steel. <i>One each of 1mm, 2mm, 3mm, 4mm, 5mm thickness</i>	
TAMS1-1-4	4 sheets 1000 x 1000 x 1mm Mild Steel	
TAMS1-2-4	4 sheets 1000 x 1000 x 2mm Mild Steel	
TAMS1-3-4	4 sheets 1000 x 1000 x 3mm Mild Steel	
TAMS1-4-2	2 sheets 1000 x 1000 x 4mm Mild Steel	
TAMS1-5-2	2 sheets 1000 x 1000 x 5mm Mild Steel	
TAMS1-6-2	2 sheets 1000 x 1000 x 6mm Mild Steel	
TAMS1-8-1	1 sheet 1000 x 1000 x 8mm Mild Steel	
TAMS1-10-1	1 sheet 1000 x 1000 x 10mm Mild Steel	

Recommended Software

2D Design V2 (page 12)

Knife Cutting

Machine Comparison Chart

Machine	Page	Price	Cut Area	Cut Speed	Force	Card	Cut / Score
STIKA							
SV-8E	33	£	160 x 1000mm	40mm/s	Fixed	n/a	Cut
SV-12E	33	£	250 x 1000mm	40mm/s	Fixed	n/a	Cut
SV-15E	33	£	340 x 1000mm	100mm/s	Fixed	n/a	Cut
CAMM 1							
GS-24E	34	£	584 x 25000mm	500mm/s	30-350g	300 micron	Cut & Score
GR-420	34	£	1075 x 25000mm	1485mm/s	20-600g	300 micron	Cut & Score
GR-540	34	£	1397 x 25000mm	1485mm/s	20-600g	300 micron	Cut & Score
GR-640	34	£	1651 x 25000mm	1485mm/s	20-600g	300 micron	Cut & Score
VersaSTUDIO							
BN-20	36	from £	480 x 25000mm	150mm/s	30-300g	300 micron	Cut & Score
TrueVIS							
SG-300	38	from £	762 x 25000mm	300mm/s	30-500g	300 micron	Cut
SG-540	38	from £	1371 x 25000mm	300mm/s	30-500g	300 micron	Cut
VG-540	38	from £	1371 x 25000mm	300mm/s	30-500g	300 micron	Cut
VG-640	38	from £	1625 x 25000mm	300mm/s	30-500g	300 micron	Cut

Machine	Page	Price	Print Width	Print Speed	Alignment	Connection	2D Design Output
STIKA							
SV-8E	33	£	Cut Only	n/a	Manual	USB	Direct Control
SV-12E	33	£	Cut Only	n/a	Manual	USB	Direct Control
SV-15E	33	£	Cut Only	n/a	Manual	USB	Direct Control
CAMM 1							
GS-24E	34	£	Cut Only	n/a	Optical	USB	Direct Control
GR-420	34	£	Cut Only	n/a	Optical	USB/Ethernet	Direct Control
GR-540	34	£	Cut Only	n/a	Optical	USB/Ethernet	Direct Control
GR-640	34	£	Cut Only	n/a	Optical	USB/Ethernet	Direct Control
VersaSTUDIO							
BN-20	36	from £	480mm		Auto & Optical	USB	Direct Control
TrueVIS							
SG-300	38	from £	762mm	< 9.4m ² /hr	Auto	Ethernet	via VersaWorks Dual*
SG-540	38	from £	1371mm	< 9.4m ² /hr	Auto	Ethernet	via VersaWorks Dual*
VG-540	38	from £	1371mm	< 32.0m ² /hr	Auto & Optical	Ethernet	via VersaWorks Dual*
VG-640	38	from £	1625mm	< 34.8m ² /hr	Auto & Optical	Ethernet	via VersaWorks Dual*

*VersaWorks Dual is supplied with the machine



Roland Knife Cutters are the only knife cutting machines to be DIRECTLY CONTROLLED from 2D Design V2

User Friendly, Low Cost Vinyl Cutters

It's easy to see why these are among the best-loved pieces of equipment we sell. We frequently come across schools still getting regular and valuable use from quite elderly models even if they have upgraded to larger machines in other areas of the department. The Stika is a compact, child-friendly machine that still has the power to fascinate as it steadily cuts out children's design work with a degree of precision that could never be achieved by hand.

Many primary schools have found a Stika to be an ideal and simple tool for pupils to take their first steps with genuine CAD/CAM activity. They work in just the same way as their bigger counterparts and can even be used for print-and-cut work by using the manual alignment tool provided with each machine. Being lighter in construction, Stikas will not cut card or plastics but will happily cope with the full range of vinyls and applied media including Ceramicon and Cutronic Foil.

Three models are available and these differ only in their capacity so you will need to check the available sizes of media you are likely to use when making your choice. The largest machine, the SV-15E, cuts at more than double the speed of the smaller models so this too needs bearing in mind if throughput and avoiding bottlenecks is a priority.

Stika SV-8E

Ideal for Education



The ideal, low cost, starter machine for real CAD/CAM activity. The perfect partner for 2D Primary as well as 2D Design, and for making small-scale stickers, labels and iron-on logos in a workshop or studio area.

Specification

Max plotting area: 160 x1000mm
 Max plotting speed: 40mm/sec
 Print Alignment: Manual
 Interface: USB Interface
 Dimensions: 340(W)x205(D)x115(H)mm
 Weight: 2.2kg

Stika SV-12E



It's still a child-friendly Stika but bigger and able to use media (maybe) bought for a larger machine. This makes it the perfect back-up for an over-worked CAMM 1 as well as an excellent medium-sized knife cutter in its own right.

Specification

Max plotting area: 250 x1000mm
 Max plotting speed: 40mm/sec
 Print Alignment: Manual
 Interface: USB Interface
 Dimensions: 440(W)x205(D)x115(H)mm
 Weight: 2.7kg

Stika SV-15E



Largest of all, the SV-15E allows A3-sized media to be handled without trimming and several projects can be 'nested' for economy. The machine cuts at twice the speed of its smaller siblings making it a serious contender.

Specification

Max plotting area: 340 x1000mm
 Max plotting speed: 100mm/sec
 Print Alignment: Manual
 Interface: USB Interface
 Dimensions: 522(W)x205(D)x115(H)mm
 Weight: 3.3kg



What's Included

Free Education Training Pack 12006

The Training Pack gives you everything you need to get the machine out of the box and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up, and then a series of projects that illustrate the full potential of the machine. Each pack contains a project CD, a booklet to guide you and a selection of materials. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - some of which are shown below - and the confidence to develop your own ideas.



Warranty

UK Mainland & Ireland: 1 Year Return to Base
 Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

Stika Machines

MP-STIKA-SV8E	Roland Stika SV-8E (inc TechSoft Training Pk)
MP-STIKA-SV12E	Roland Stika SV-12E (inc TechSoft Training Pk)
MP-STIKA-SV15E	Roland Stika SV-15E (inc TechSoft Training Pk)

Accessories

See details of these cutters and our full range of accessories on pages 48-49

TA-CMC	Carbide Cutter x 1
TA-CMC-5	Carbide Cutter x 5

Recommended Materials

See details of these packs on page 47, and our full range of materials on pages 40 - 47

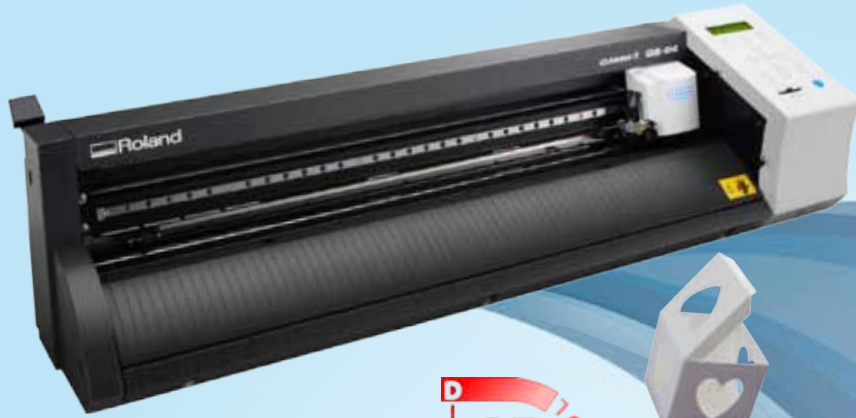
TPM-SV8	Materials Pack for SV-8E (Save £5)
TPM-SV12	Materials Pack for SV-12E (Save £7)
TPM-SV15	Materials Pack for SV-15E (Save £7)

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14) and 2D Primary (page 16)

Knife Cutting

Roland CAMM 1



Versatile and Popular Cutting Machine for Vinyl, Card, etc.

Roland Knife Cutters are the only knife cutting machines to be DIRECTLY CONTROLLED from 2D Design V2



What is a Knife Cutter?

A good quality knife-cutter is the ideal entry point for developing CAD/CAM as an important strand in the Design and Technology curriculum. The machines are quiet and inherently safe to use which makes them the most child-friendly option for a huge variety of project outcomes in just about every area of the subject. This versatility and a low initial cost means that almost any department can get started with real CAD/CAM activity even if budgets do not stretch to milling or laser systems. But the machines are far more than entry level tools and they will never be made redundant by new or different technologies. Knife cutting is the only way to cut delicate 'applied media' in vinyl and only knife cutters can offer registration mark recognition and the fine control needed for print and cut work.

Why Choose a CAMM 1?

Roland CAMM 1 machines have set the standard for school knife cutters since their introduction over 19 years ago. The GS-24 is the latest guise of this benchmark machine and it features several significant improvements. Servo motors now give even faster and smoother cutting, while preserving pin-point accuracy. Roland's Optical Print Alignment System (OPAS) is standard on all GS-24s - this allows students to exploit high quality colour printing from modern ink-jet or laser printers, and to align the printed graphics to a cutting path for bespoke stickers, labels, logos and packaging products. The GS-24E handles media from matchbox-size off-cuts, to 584mm widths up to 25m long, so it will accommodate any of the roll or sheet materials TechSoft supply with no trimming and no wastage. For print-and-cut work this means A4 and A3 printed sheets are no problem and, if you have access to a large format printer, you can even print and cut A2 size nets, stencils, etc. 2D Design V2 has been designed to work with OPAS. Once the design page has been set to match the GS-24, all the machine settings are automatically sent to the machine on output - no buttons to press. The maximum speed of 500mm/sec means that simple individual projects will cut in a few moments and large or 'nested' sets of class work will take minutes at the most.

Which CAMM 1 Do I Need?

Most schools and colleges will find that a GS-24E will give them everything they need in a knife cutter at an excellent price with no compromise to capacity or performance.

N.B. Pens can replace the cutter for simple illustrations. However all printing must be done on an independent printer before score & cut lines are made on the CAMM 1.



CAMM 1 GS-24E



Ideal for Education

The ideal machine for most busy departments. Fast enough for large or complex vinyl work; cuts printed card up to A2 size using optical print alignment. Robust and well-proven in schools, the GS-24E comes with a renowned TechSoft Training Pack.

Specification

Max plotting area:	584 x 25000mm
Max plotting speed:	500mm/sec
Print Alignment:	Optical System
Interface:	USB
Motor:	Digital Servo
Dimensions:	860(W) x 319(D) x 233(H) mm
Weight:	13.5kg

CAMM 1 GR-420 / GR-540 / GR-640



The GR series of knife cutters are super-fast, high power knife cutters with advanced features for the most demanding commercial applications. There are three machines in the range, differing only in size. Each of the machines uses optical print alignment giving them the ability to align-and-cut printed media in large sizes. They are ideal for large-scale work, possibly in heavier material. They are designed for a totally professional level of sign, apparel, vehicle graphics and packaging production.

Specifications

	GR-420	GR-540	GR-640
Max plotting area:	1075 x 25000mm	1397 x 25000mm	1651 x 25000mm
Max plotting speed:	1,485mm/sec	1,485mm/sec	1,485mm/sec
Print Alignment:	Optical System	Optical System	Optical System
Interface:	USB/Ethernet	USB/Ethernet	USB/Ethernet
Motor:	Digital Servo	Digital Servo	Digital Servo
Dimensions:	1650(W) x 740(D) x 1190(H) mm	1910(W) x 740(D) x 1190(H) mm	2165(W) x 740(D) x 1190(H) mm
Weight:	78kg	87kg	93.5kg

What's Included

Free Education Training Pack 11971 (GS-24E Only)

The Training Pack gives you everything you need to get the machine out of the box and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up, and then a series of projects that illustrate the full potential of the machine. Each pack contains a project CD, a booklet to guide you and a selection of materials. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - some of which are shown below - and the confidence to develop your own ideas.



Warranty

UK Mainland & Ireland:	2 Years On-Site
Elsewhere:	2 Years Return and Collect

Prices £*

*See Pricing Information on page 2

CAMM 1 Machines

MP-CAMM1-GS24E	Roland CAMM 1 GS-24E (inc. TechSoft Training Pack)
MP7-CAMM1-GS24E	CAMM 1 GS-24E Workstation Package Includes Machine, TechSoft Training Pack, TechSoft Workstation with cupboards and in-built sockets, drawers, shelves and storage space for computer (see page 205).
RL-CAMM1-GR420	Roland CAMM 1 GR-420 (supplied with integrated stand and media holder)
RL-CAMM1-GR540	Roland CAMM 1 GR-540 (supplied with integrated stand and media holder)
RL-CAMM1-GR640	Roland CAMM 1 GR-640 (supplied with integrated stand and media holder)

Recommended Extras

TF-WS3-C2	TechSoft Workstation for Knife Cutting. See page 205
RL-STAND2	Stand for GS-24E (same as stand for BN-20, see page 37)

Recommended Materials

See details of this pack on page 47, and our full range of materials on pages 40 - 47

TPM-GX24	Mixed Materials Pack for GS-24E Save £10
-----------------	---

Accessories

See details of these cutters and our full range of accessories on pages 48 - 49

TA-CMC	Carbide Cutter x 1
TA-CMC-5	Carbide Cutter x 5

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14), 2D Primary (page 16)

Print and Cut

Roland VersaSTUDIO BN-20



Bringing Print and Cut to the Desktop



The Versa STUDIO BN-20 Metallic Configuration is the only print and cut machine to be DIRECTLY CONTROLLED from 2D Design V2

VersaSTUDIO in Education

The VersaSTUDIO BN-20 is what design departments have been waiting for! A neat desktop machine which delivers durable, high-quality print results then (for lighter media) cuts out the design in one seamless operation. TechSoft are delighted to introduce this breakthrough in print and cut technology from Roland DG.

The VersaSTUDIO BN-20 is (in effect) two machines in one. As a large-format printer, it uses advanced Eco-Sol inkjet technology so low-odour, high quality and durability is assured. As a knife-cutter VersaStudio BN-20 has all the capability and features of the hugely popular Roland CAMM 1 range. Both features are controlled from 2D Design and output can be print only (for banners or posters), cut only (for vinyl media, stencils, etc.) or print-and-cut (for printed stickers, labels and custom graphics). For packaging work, you will need our specially formulated 'Printable Card for Eco-Sol Inks' (see page 43) and for this, output is best handled in two operations. Thicker media needs more time to let the print dry (whilst drying the machine can of course be used to print other jobs) so best results are achieved by printing with crop marks, allowing drying time and then cutting using BN-20's optical registration system.

Materials and Applications

TechSoft supply a wide range of media for the BN-20 so production can target a broad customer base. For textiles, heat-transfer media can be printed in vibrant colour and then contour-cut ready for heat pressing to the garment. As a wide format printer, the BN-20 is a valuable, versatile resource for creating banners, posters and artwork.

The BN-20 will handle media up to 505mm width so will be ideal for producing batch runs of vinyl graphics from roll material. In-house production of window signage, promotional stickers, vehicle wraps and floor graphics has never been easier or so affordable. A2 media capability, of course, makes the BN20 ideal for printing card packaging nets. Once dry, the same machine will then cut and score (or crease) the card for perfect results.



Merit Stickers in vinyl



Print and Cut Packaging



Vinyl stickers on a 3D printed prototype



Vinyl Stickers on a window



Peelable Vinyl



Vinyl graphic decoration



Banner



Canvas Print



Print and Cut Packaging



Iron-on Vinyl logo

VersaSTUDIO BN-20



Compact print-and-cut technology for superb results and maximum versatility. Large format-printing and CNC knife-cutting capability in a neat, desktop package.

Specification

Print Resolution:	Max. 1440dpi
Print Ink:	Eco-Sol
Max Print Width:	480mm
Max Cutting Speed:	150mm/s
Interface:	USB
Dimensions:	995(W) x 585(D) x 291(H)mm
Weight:	35kg

Stand for BN-20



If desk space is at a premium, this robust stand will securely support the VersaSTUDIO BN-20 while providing a clear path for the printed media to escape. The stand features powder coated steel components for a long life and smart appearance.

Stand Specification

Dimensions:	780(W) x 530(D) x 840(H)mm
Weight:	12kg

Workstation Package



A smart and robust TechSoft workstation containing space for a PC and storage for the materials needed for convenient operation of the BN-20. Integral wiring and sockets deal with cable management so mains connection is by a single 13A plug. Mounted on locking castors it provides a portable plug-and-play resource.

Workstation Specification

Dimensions:	1400(W) x 800(D) x 850(H) mm
Weight:	350kg

Printing Card Packaging Nets

Print and Cut card packaging is a two stage process direct from 2D Design. Print the card together with registration marks, allow to dry, then re-insert into the BN-20 to score (or crease) and cut.



Should I Choose the Metallic Configuration?

The BN-20 delivers superb print quality using CMYK ink technology and if desired, metallic silver. Metallic silver print resembles polished-chrome and overprinting in colour adds a further dimension, shining through to give any number of stunning pearlescent or metallic effects.

On purchase, you must decide whether you need Metallic Silver ink, as the machine is factory configured accordingly. A BN-20 configured for Metallic Silver cannot be re-configured for other colours (or vice-versa), so choose carefully!

N.B. A third option, a white ink configuration, is also available on request for output from Roland VersaWorks, but the direct File > Print routine from 2D Design V2 is not available with this.

What's Included

Software

Roland R - Works Software (basic design software)
 Roland VersaWorks Software (print management software)
 Windows Printer Driver

Warranty

UK Mainland & Ireland: 1 Year On-Site
 Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

VersaSTUDIO Machines

MP3-VERSA-BN20	Roland VersaSTUDIO BN-20 4 Colour Configuration (inc 5 cartridges - 1 black, 1 cyan, 2 magenta and 1 yellow)
MP2-VERSA-BN20	Roland VersaSTUDIO BN-20 5 Colour Metallic Configuration (inc 5 cartridges - 1 black, 1 cyan, 1 magenta, 1 yellow & 1 metallic silver)
MP8-VERSA-BN20	BN-20 4 Colour Configuration Workstation Package. Includes Machine, 5 cartridges (1 black, 1 cyan, 2 magenta, 1 yellow), TechSoft Workstation with cupboards and in-built sockets, drawers, shelves and storage space for computer (see page 205).
MP7-VERSA-BN20	BN-20 5 Colour Metallic Configuration Workstation Package. Includes Machine, 5 cartridges (1 black, 1 cyan, 1 magenta, 1 yellow & 1 metallic silver), TechSoft Workstation with cupboards and in-built sockets, drawers, shelves and storage space for computer (see page 205).

Recommended Extras

TF-WS3-C2	TechSoft Workstation for Knife Cutting (see page 205).
RL-STAND2	Stand for BN-20

Recommended Materials

See details of this pack on page 47, and our full range of materials on pages 40 - 47

TPM-BN20	Mixed Materials Pack for BN-20 <i>Save £10</i>
-----------------	---

Accessories

See details of these cutters and our full range of accessories on pages 48 - 49

TA-CMC	Carbide Cutter x 1
TA-CMC-5	Carbide Cutter x 5

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14)



Printing & Cutting, All in One Machine

What is TrueVIS?

It's best to think of TrueVIS as a high quality large format printer as well as being a knife cutter. If you've ever wondered how those full size 'vehicle wraps' are produced where sharp, photographic advertising images are put onto vans, trucks and buses then there's a good chance that they came from a TrueVIS. The machine prints images onto vinyl and then cuts them in exactly the right shape to fit the vehicle. A modern print-shop will use the TrueVIS to batch-produce self-adhesive stickers, labels, point of sale displays, floor graphics, signage and heat transfer images for interior decoration and garments. When you check the working width of these machines you will see that a few metres of print run will produce hundreds of high quality peel-and-stick product labels. TrueVIS has so many uses that a commercial printer couldn't live without one and, indeed, this latest generation of machines from Roland have proved a phenomenal success worldwide.

TrueVIS in Education

TrueVIS delivers superb print quality for banners, posters, photographs or digital artwork, so has huge potential for improving the quality and scale of school/college displays, signage and promotional material. It will enable professional quality graphics to be applied to any manner of projects in Graphics or Product Design, and make the production of class sets of digital graphic products a swift and efficient operation. TrueVIS uses advanced four-colour inkjet technology but needs special media to achieve high resolution printing.

Both SG and VG TrueVIS machines will print well onto our specially formulated 'Printable Card for TrueVIS Inks' (see page 43). Due to the solvent nature of the inks, neither will print onto standard card. Both will cut card well but TrueVIS machines are not ideally suited to printing and cutting card in one operation, eg., for card packaging nets. This process can be achieved using a TrueVIS but, if this is your primary need, the VersaSTUDIO BN-20 or Roland CAMM 1 GS-24E machines provide more flexible options using their optical print alignment capabilities and control from 2D Design V2.

Materials and Applications

A range of special materials are available for TrueVIS and these include self-adhesive vinyls, poster paper, printable iron-on media, water transfer paper, banner materials and a textured canvas to give printed posters the appearance of a traditional painter's canvas. Details of these are given on pages 40-49. A TrueVIS is probably going to be a whole-school resource as much as a great tool for Design and Technology, Graphics and Art. It has huge potential for Business and Enterprise activities and would be a valuable shared resource for a regional Hub School, CLC or Professional Development Centre.



Vinyl decoration



Vinyl Stickers



Iron-on Vinyl logo



Canvas print



Vinyl Merit Stickers



Roll-up Banner



Vinyl graphic decoration



Vinyl stickers on a 3D Printed prototype

TrueVIS SG-300



Ideal for Education

The smallest machine, the SG-300, delivers excellent four-colour print quality on media up to 762mm wide. Print and cut speeds are sufficient for a busy print shop, so should be more than adequate in an educational setting. The SG-300 is ideal where space is limited.

Specification

Print Resolution:	Max. 90dpi
Print Speed:	Up to 9.4m ² /hr
Print Ink:	TrueVIS Ink
Max Print Width:	762mm
Max Cutting Speed:	300mm/s
Interface:	Ethernet
Dimensions:	2070(W) x 745(D) x 1310(H)mm
Weight:	147kg

TrueVIS SG-540



The same print-and-cut technology as the SG-300 but nearly double the print width. Ideal for large banners and posters, as well as being able to cut vinyl stencil and applied graphics, this machine can soon earn its keep in an educational setting.

Specification

Print Resolution:	Max. 900dpi
Print Speed:	Up to 9.4m ² /hr
Print Ink:	TrueVIS Ink
Max Print Width:	1371mm
Max Cutting Speed:	300mm/s
Interface:	Ethernet
Dimensions:	2685(W) x 745(D) x 1310(H)mm
Weight:	178kg

TrueVIS VG Series



Whether you need large scale, high volume production or photo-realistic flesh tones, the TrueVIS VG series can deliver. There are two sizes of machines each with three different ink configurations to accommodate your department's specific requirements.

Specification

Print Resolution:	Max. 900dpi
Print Speed:	Up to 32.0m ² /hr (VG-540) Up to 34.8m ² /hr (VG-640)
Print Ink:	TrueVIS Inks (8, 7 or 4 Colours)
Max Print Width:	1371mm (VG-540) 1625mm (VG-640)
Max Cutting Speed:	300mm/s
Interface:	Ethernet
Dimensions VG-540:	2685(W) x 745(D) x 1310(H)mm
Dimensions VG-640:	2945(W) x 745(D) x 1310(H)mm
Weight:	191kg (VG-540) 205kg (VG-640)

Prices £*

*See Pricing Information on page 2

TrueVIS Machines

MP-TV-SG300	Roland TrueVIS SG-300* (Includes Stand, Commissioning & 2 Hours Training UK Mainland Only)
MP-TV-SG540	Roland TrueVIS SG-540* (Includes Stand, Commissioning & 2 Hours Training UK Mainland Only)
MP-TV-VG540	Roland TrueVIS VG-540* (Includes Stand, Roll-Up System, Commissioning & 2 Hours Training UK Mainland Only)
MP-TV-VG640	Roland TrueVIS VG-640* (Includes Stand, Roll-Up System, Commissioning & 2 Hours Training UK Mainland Only)

Ink Configuration for TrueVIS SG Series

* Ink must be purchased separately

RLP-TV-SG4C1	Pack of 4 TrueVIS 500ml Ink Cartridges for SG-300/540 + 1 500ml Cleaning Cartridge (Cyan, Magenta, Yellow, Black)
--------------	---

Ink Configuration for TrueVIS VG Series

* Ink must be purchased separately. One of the following configurations must be selected at time of purchase. (The configuration cannot be changed at a later date).

RLP-TV-VG4C1	Pack of 8 TrueVIS 500ml Ink Cartridges for VG-540/640 (4 Colour Config.) + 1 500ml Cleaning Cartridge (2 x Cyan, 2 x Magenta, 2 x Yellow, 2 x Black)
RLP-TV-VG7C1	Pack of 7 TrueVIS 500ml Ink Cartridges for VG-540/640 (7 Colour Config.) + 1 500ml Cleaning Cartridge (Cyan, Magenta, Yellow, Black, Light Cyan, Light Magenta, Light Black)
RLP-TV-VG8C1	Pack of 8 TrueVIS 500ml Ink Cartridges for VG-540/640 (8 Colour Config.) + 1 500ml Cleaning Cartridge (Cyan, Magenta, Yellow, Black, Light Cyan, Light Magenta, Light Black, White)

Automatic Roll-Up Systems (Automatically winds up the printed material)

RLP-TV-TU300	Material Handling System for SG-300
RLP-TV-TU540	Material Handling System for SG-540

Recommended Materials

See details of these packs on page 47, and our full range of materials on pages 40 - 47

TPM-SP300	Mixed Materials Pack for SG-300 Save £15
TPM-SP540	Mixed Materials Pack for SG-540, VG-540/640 Save £15

Accessories

See details of our full range of accessories on pages 48 - 49

**Design & Print
Banners
Canvas Prints
for your school**



What's Included

Stand

Each TrueVIS is supplied with its own stand.

Software

Roland VersaWorks™ Dual (print management software)
N.B. 2D Design V2 outputs to the TrueVIS via VersaWorks™ Dual software. The link is provided by the VersaWorks printer driver (File > Print in 2D Design V2).

Commissioning & Training

The cost of the TrueVIS also includes commissioning and training on the same day.

Warranty

UK Mainland & Ireland: 1 Year On-Site
Elsewhere: 1 Year Return and Collect

Knife Cutting

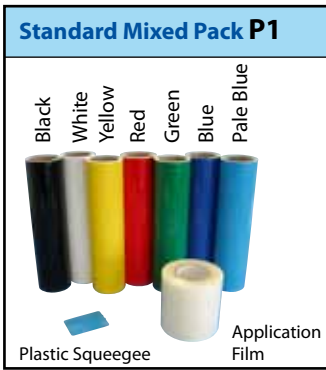
Materials

Coloured Vinyl

Our high quality coloured vinyl is ideal for using on the CAMM 1, VersaCMM, TrueVIS, VersaSTUDIO, STIKA and CraftROBO - TS machines. It has a gloss finish and a 3 to 5 year external rating. It will stick to almost any clean, dry surface. This self-adhesive vinyl may be used for signs, labels, decals, logos, numbering on clock faces, etc.

Producing a sign is normally a two stage process requiring the use of application film (see page 48). For example, if the sign is text, this is cut out on a knife cutting system, then the vinyl is weeded (all the surplus vinyl is peeled off), leaving just the letters on the backing paper. A piece of application film (like a giant piece of low tack sellotape) is stuck onto the letters. When this is pulled off the paper backing, all the letters come off with it. The application film is then positioned where the sign is to be, and rubbed over firmly with a plastic squeegee. When it is then peeled off, the letters stay put, thus creating the sign.

Coloured vinyl is available in a range of widths to suit the various machines, and in a range of twelve standard colours. N.B. Colours shown are only an indication.



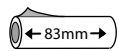
Metallic Colours P2



Mirrored Colours P4



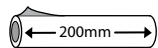
* When ordering, where COL, GS or M-GS is included in the order code, please change this to specify the actual colour required.



83mm wide vinyl

(for Stika SCP-85):

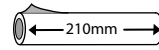
MF-RO50-COL*	Roll of standard colour vinyl 50m x 83mm	
---------------------	--	--



200mm wide vinyl

(for Stika SV-8E, SX-8E, STX-7):

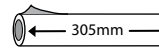
TAVN2-P1	Mixed pack of vinyl & application film (Includes 10m x 200mm of each P1 colour and 100m x 150mm app. film)	
TAVN2-P3	Mixed pack of vinyl & application film (Includes 10m x 200mm of each P3 colour and 100m x 150mm app. film)	
TAVN2-P2	Pack of gold and silver vinyl (10m x 200mm of each colour)	
TAVN2-P4	Pack of mirrored gold and silver vinyl (10m x 200mm of each colour)	
TAVN2-50-COL*	50m x 200mm roll of standard colour vinyl	
TAVN2-50-GS*	50m x 200mm roll of gold or silver vinyl	
TAVN2-50-M-GS*	50m x 200mm roll of mirrored gold or silver vinyl	



210mm wide vinyl

(for CraftROBO - TS):

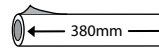
TAVN21-P1	Mixed pack of vinyl & application film (Includes 10m x 210mm of each P1 colour and 100m x 150mm app. film)	
TAVN21-P3	Mixed pack of vinyl & application film (Includes 10m x 210mm of each P3 colour and 100m x 150mm app. film)	
TAVN21-P2	Pack of gold and silver vinyl (10m x 210mm of each P2 colour)	
TAVN21-P4	Pack of mirrored gold and silver vinyl (10m x 210mm of each P4 colour)	
TAVN21-50-COL*	50m x 210mm roll of standard colour vinyl	
TAVN21-50-GS*	50m x 210mm roll of gold or silver vinyl	
TAVN21-50-M-GS*	50m x 210mm roll of mirrored gold or silver vinyl	



305mm wide vinyl

(for CAMM 1 CX-12/E, Stika SV-12E, SV-15E, SX-12E, SX-15E, STX-8):

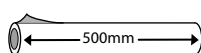
TAVN3-P1	Mixed pack of vinyl & application film (Includes 10m x 305mm of each P1 colour and 100m x 150mm app. film)	
TAVN3-P3	Mixed pack of vinyl & application film (Includes 10m x 305mm of each P3 colour and 100m x 150mm app. film)	
TAVN3-P2	Pack of gold and silver vinyl (10m x 305mm of each P2 colour)	
TAVN3-P4	Pack of mirrored gold and silver vinyl (10m x 305mm of each P4 colour)	
TAVN3-25-COL*	25m x 305mm roll of standard colour vinyl	
TAVN3-25-GS*	25m x 305mm roll of gold or silver vinyl	
TAVN3-25-M-GS*	25m x 305mm roll of mirrored gold or silver vinyl	
TAVN3-50-COL*	50m x 305mm roll of standard colour vinyl	
TAVN3-50-GS*	50m x 305mm roll of gold or silver vinyl	
TAVN3-50-M-GS*	50m x 305mm roll of mirrored gold or silver vinyl	



380mm wide vinyl

(for Stika SV-15E, SX-15E, CraftROBO-TS Pro II):

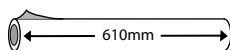
TAVN4-P1	Mixed pack of vinyl & application film (Includes 10m x 380mm of each P1 colour and 100m x 150mm app. film)	
TAVN4-P3	Mixed pack of vinyl & application film (Includes 10m x 380mm of each P3 colour and 100m x 150mm app. film)	
TAVN4-P2	Pack of gold and silver vinyl (10m x 380mm of each P2 colour)	
TAVN4-P4	Pack of mirrored gold and silver vinyl (10m x 380mm of each P4 colour)	
TAVN4-25-COL*	25m x 380mm roll of standard colour vinyl	
TAVN4-25-GS*	25m x 380mm roll of gold or silver vinyl	
TAVN4-25-M-GS*	25m x 380mm roll of mirrored gold or silver vinyl	
TAVN4-50-COL*	50m x 380mm roll of standard colour vinyl	
TAVN4-50-GS*	50m x 380mm roll of gold or silver vinyl	
TAVN4-50-M-GS*	50m x 380mm roll of mirrored gold or silver vinyl	



500mm wide vinyl

(for CAMM 1 GS-24E, GX-24E, CX-24EO, CX-24/E, CX-300/E, TrueVIS, VersaSTUDIO, VersaCAMM, ColorCAMM PC-600):

TAVN5-P1	Mixed pack of vinyl & application film (Includes 10m x 500mm of each P1 colour and 100m x 150mm app. film)
TAVN5-P3	Mixed pack of vinyl & application film (Includes 10m x 500mm of each P3 colour and 100m x 150mm app. film)
TAVN5-P2	Pack of gold and silver vinyl (10m x 500mm of each P2 colour)
TAVN5-P4	Pack of mirrored gold and silver vinyl (10m x 500mm of each P4 colour)
TAVN5-25-COL*	25m x 500mm roll of standard colour vinyl
TAVN5-25-GS*	25m x 500mm roll of gold or silver vinyl
TAVN5-25-M-GS*	25m x 500mm roll of mirrored gold or silver vinyl
TAVN5-50-COL*	50m x 500mm roll of standard colour vinyl
TAVN5-50-GS*	50m x 500mm roll of gold or silver vinyl
TAVN5-50-M-GS*	50m x 500mm roll of mirrored gold or silver vinyl



610mm wide vinyl

(for CAMM 1 GS-24E, GX-24E, CX-24EO, CX-24/E, CX-300/E, TrueVIS, VersaCAMM, ColorCAMM PC-600):

TAVN6-P1	Mixed pack of vinyl & application film (Includes 10m x 610mm of each P1 colour and 100m x 150mm app. film)
TAVN6-P3	Mixed pack of vinyl & application film (Includes 10m x 610mm of each P3 colour and 100m x 150mm app. film)
TAVN6-P2	Pack of gold and silver vinyl (10m x 610mm of each P2 colour)
TAVN6-P4	Pack of mirrored gold and silver vinyl (10m x 610mm of each P4 colour)
TAVN6-25-COL*	25m x 610mm roll of standard colour vinyl
TAVN6-25-GS*	25m x 610mm roll of gold or silver vinyl
TAVN6-25-M-GS*	25m x 610mm roll of mirrored gold or silver vinyl
TAVN6-50-COL*	50m x 610mm roll of standard colour vinyl
TAVN6-50-GS*	50m x 610mm roll of gold or silver vinyl
TAVN6-50-M-GS*	50m x 610mm roll of mirrored gold or silver vinyl

Transparent Vinyl

Transparent Vinyl is available in a range of different colours and sizes. See www.techsoft.co.uk/Products/KnifeCuttingMaterials/TransparentVinyl for details and prices.

Frosted ("Etched Glass") Vinyl

You often see etched glass on signs, shop windows, etc. In fact nowadays this effect is almost always achieved with frosted vinyl. This is simply cut and applied like ordinary vinyl.

TAVF2-10	10m x 200mm roll of frosted vinyl
TAVF21-10	10m x 210mm roll of frosted vinyl
TAVF3-10	10m x 305mm roll of frosted vinyl
TAVF4-10	10m x 380mm roll of frosted vinyl
TAVF5-10	10m x 500mm roll of frosted vinyl
TAVF6-10	10m x 610mm roll of frosted vinyl
TAVF7-10	10m x 760mm roll of printable frosted vinyl
TAVF13-10	10m x 1370mm roll of printable frosted vinyl

Removable Vinyl

A range of "removable" vinyls is available for internal use. See www.techsoft.co.uk/Products/KnifeCuttingMaterials/RemovableVinyl for details and prices.

Glitter & Sequin Vinyl

These special vinyls will add a real sparkle to any project. The glitter finish offers a fine sparkle effect, whilst the sequin finish looks like thousands of small overlapping sequins. The glitter and sequin vinyl is supplied in both A4 and A3 sheets. N.B. Colours shown are only an indication.

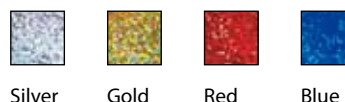
Glitter



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

TAVG4-P1	Mixed pack of 7 A4 glitter vinyl sheets One of each colour
TAVG4-10-COL*	Pack of 10 A4 glitter vinyl sheets All same colour
TAVG3-P1	Mixed pack of 7 A3 glitter vinyl sheets One of each colour
TAVG3-10-COL*	Pack of 10 A3 glitter vinyl sheets All same colour

Sequin



TAVS4-P1	Mixed pack of 8 A4 sequin vinyl sheets Two of each colour
TAVS4-10-COL*	Pack of 10 A4 sequin vinyl sheets All same colour
TAVS3-P1	Mixed pack of 8 A3 sequin vinyl sheets Two of each colour
TAVS3-10-COL*	Pack of 10 A3 sequin vinyl sheets All same colour

Metallic Special Effect Vinyl

Have you ever seen the rainbow effect from oil on water? Well this probably best describes these three iridescent metallic vinyls, which are supplied in both A4 and A3 sheets. N.B. Colours shown are only an indication.



Bright Overall Andromeda Aurora

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

TAVR4-P1	Mixed pack of 6 A4 metallic special effect vinyl sheets. Two of each colour.
TAVR4-10-COL*	Pack of 10 A4 metallic special effect vinyl sheets. All same colour.
TAVR3-P1	Mixed pack of 6 A3 metallic special effect vinyl sheets. Two of each colour.
TAVR3-10-COL*	Pack of 10 A3 metallic special effect vinyl sheets. All same colour.

Materials

Printable Vinyl



This special self-adhesive vinyl is ideal for printing and cutting, to produce glossy full colour labels for jars, bottles, sandwich packs, etc., or decals on any number of products (indoor use only). This is done by pre-printing the design onto the material using a colour printer (most inkjet printers and some laser printers), then using a knife cutting system to do the cutting. The printable vinyl is aligned in the machine either automatically (GS-24E, GX-24E, CX-24EO or the CraftROBO - TS), or manually (STIKA, older CAMM 1s - this is made easier by using the TechSoft Alignment Guide supplied in Training Packs). The vinyl is supplied in A4 and A3 sheets.

For Inkjet Printers

Inkjet Printable Vinyl is available in clear (C) and white (W) gloss.

** When ordering, where CW is included in the order code, please change this to specify whether clear (C) or white (W) is required.*

TAVP-K4-10-CW*	10 A4 sheets printable vinyl	
TAVP-K4-50-CW*	50 A4 sheets printable vinyl	
TAVP-K4-100-CW*	100 A4 sheets printable vinyl	
TAVP-K3-10-CW*	10 A3 sheets printable vinyl	
TAVP-K3-50-CW*	50 A3 sheets printable vinyl	
TAVP-K3-100-CW*	100 A3 sheets printable vinyl	

For TMT Laser Printers (see page 118)

Laser Printable Vinyl is available in clear (C), white (W), silver (S) and gold (G) gloss.

** When ordering, where CWSG is included in the order code, please change this to specify whether clear (C), white (W), silver (S) or gold (G) is required.*

TAVP-L4-10-CWSG*	10 A4 sheets printable vinyl	
TAVP-L4-50-CWSG*	50 A4 sheets printable vinyl	
TAVP-L4-100-CWSG*	100 A4 sheets printable vinyl	
TAVP-L3-10-CWSG*	10 A3 sheets printable vinyl	
TAVP-L3-50-CWSG*	50 A3 sheets printable vinyl	
TAVP-L3-100-CWSG*	100 A3 sheets printable vinyl	

For TrueVIS/Eco-Sol Inks Only

Vinyl for TrueVIS/Eco-Sol inks has a polyester coated backing and it therefore does not absorb moisture like standard vinyls. This eliminates potential distortion when the vinyl is heated on the VersaCAMM or TrueVIS, prior to and after printing. The vinyl is available in gloss white or clear.



** When ordering, where CW is included in the order code, please change this to specify whether clear (C) or white (W) gloss is required.*

505mm wide (for VersaSTUDIO BN-20)

TAVU5-25-CW*	25m x 505mm roll of printable vinyl	
TAVU5-50-CW*	50m x 505mm roll of printable vinyl	

760mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300i)

TAVU7-25-CW*	25m x 760mm roll of printable vinyl	
TAVU7-50-CW*	50m x 760mm roll of printable vinyl	

1370mm wide (for TrueVIS SG-540, VG-540/640 & VersaCAMM SP-540i, VS-540i/640i)

TAVU13-25-CW*	25m x 1370mm roll of printable vinyl	
TAVU13-50-CW*	50m x 1370mm roll of printable vinyl	

Peelable Printable Vinyl for TrueVIS/Eco-Sol Inks

Peelable vinyl for TrueVIS/Eco-Sol inks can be printed and cut by a VersaSTUDIO, VersaCAMM or TrueVIS and then applied to smooth interior surfaces. The vinyl has a special low tack adhesive which allows it to be peeled off again. Ideal for temporary indoor graphics and signage. This peelable vinyl is available in white gloss, white matt or clear.



** Where GMC is included in the order code, please change this to specify whether white gloss (G), white matt (M) or clear (C) is required.*

456mm wide (for VersaSTUDIO BN-20)

TAV-PV4-5-GMC*	5m x 456mm roll of peelable vinyl	
TAV-PV4-25-GMC*	25m x 456mm roll of peelable vinyl	

685mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300i)

TAV-PV7-5-GMC*	5m x 685mm roll of peelable vinyl	
TAV-PV7-25-GMC*	25m x 685mm roll of peelable vinyl	

1370mm wide (for TrueVIS SG-540, VG-540/640 & VersaCAMM SP-540i, VS-540i/640i)

TAV-PV13-5-GMC*	5m x 1370mm roll of peelable vinyl	
TAV-PV13-25-GMC*	25m x 1370mm roll of peelable vinyl	

Printable Paper / Poster Paper

Label Paper For Most Inkjet/Laser Printers

This special low cost self-adhesive paper is ideal for printing and cutting, to produce full colour labels for jars, bottles, sandwich packs, etc., or decals on any number of products. Label paper can be printed using most inkjet or laser printers, and then cut with nearly any CAMM 1, STIKA or CraftROBO.



TASP-100	100 A4 sheets self-adhesive paper	
TASP-500	500 A4 sheets self-adhesive paper	
TAPR5-50	50m x 500mm roll of self-adhesive paper	

Poster Paper for TrueVIS/Eco-Sol Inks Only

Poster paper for TrueVIS/Eco-Sol inks produces good print quality, making it ideal for creating large scale posters.

505mm wide (for VersaSTUDIO BN-20)

TAV-DPB5-15	15m x 505mm, 140gsm, satin finish paper	
TAV-DPB5-61	61m x 505mm, 140gsm, satin finish paper	

760mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300i)

TAV-DPB7-15	15m x 760mm, 140gsm, satin finish paper	
TAV-DPB7-61	61m x 760mm, 140gsm, satin finish paper	

1270mm wide (for TrueVIS SG-540, VG-540/640, VersaCAMM SP-540i & VS-540i/640i)

TAV-DPB13-15	15m x 1270mm, 140gsm, satin finish paper	
TAV-DPB13-61	61m x 1270mm, 140gsm, satin finish paper	

Card

We are often asked about suitable card for cutting with a CAMM 1, VersaSTUDIO, VersaCAMM, TrueVIS or CraftROBO - TS. In fact most "cards", as opposed to "paper" or "cardboard" will cut quite well. However, to ensure peace of mind, we have tested a range of cards and are now stocking what we consider to be the best.



For CAMM 1 & CraftROBO-TS

This card cuts cleanly, folds crisply, and has a smooth silk finish which takes plotter pens well.

CA053	200 sheets 275gsm, A4 card	
CA054	100 sheets 275gsm, A3 card	
CA055	100 sheets 275gsm, A2 card	

N.B. With some inkjet printers it has been found that the card below (For ColorCAMM) give a better quality print, but it may require an extra cutting pass.

For TrueVIS/Eco-Sol Inks Only, ie. TrueVIS, VersaCAMM, BN-20

This high quality card has a special coating that accepts solvent inks from the TrueVIS, VersaCAMM and VersaSTUDIO range. Print quality is superb and the card cuts and scores cleanly to allow print-and-cut packaging projects from a single machine.

N.B. The roll will need to be cut down to sheets in order to fit the VersaSTUDIO BN-20.

TAV-CR610-30	30.5m x 610mm roll card for VersaCAMM	
TAV-CR762-30	30.5m x 762mm roll card for VersaCAMM	
TAV-CR1372-30	30.5m x 1372mm roll card for VersaCAMM	

For ColorCAMM

Card for the ColorCAMM has a fine semi-matt finish and works well with the ColorCAMM wax cartridges.

CA048	200 sheets 300gsm, A4 card	
CA052	100 sheets 300gsm, A2 card	

Plotter Paper / Pens

Plotter Paper

CA029	250 sheets 115gsm A3 plotter paper	
CA041	250 sheets 115gsm A4 plotter paper	
TA-PLOT-50	Roll of 90gsm plotting paper 50m x 610mm	
TA-TRAC6-50	Roll of 90gsm tracing paper 45m x 610mm	

Pens for Roland Plotters, CAMM 1, STIKA

For plotter paper: 0.3mm water based nylon tip pens

F51252	5 pens, black (water based)	
G37939	4 pens (black, red, blue, green)	

For direct plotting onto PCBs (as an etch resist), and OHPs: 0.3mm oil based fibre tip pens

F53252	5 pens, black	
G37763	4 pens (black, red, blue, green)	
G37773	4 pens (brown, orange, black, violet)	

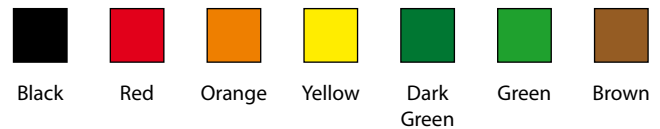
Ceramic Transfers

Designs have been put on ceramics by 'wet transfer' for many years. Now, with TechSoft Ceramic transfer material you can create designs using the CAMM 1, VersaSTUDIO, VersaCAMM, TrueVIS, STIKA or CraftROBO - TS. Simply cut as if cutting vinyl, then place the sheet in a bowl of water. After about 20 seconds the image may be floated off the paper and onto the article to be glazed. Leave to dry then fire in a kiln. The process works with ceramic tiles or ready made 'white ware'- including mugs, plates, etc. Once fired the transfer becomes part of the object and is dishwasher proof. It can also be used to enamel jewellery.

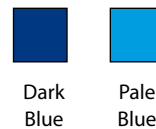


Ceramicon is available in sheets, in a range of colours.

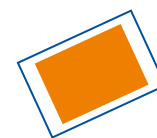
N.B. Colours shown are only an indication.



Black Red Orange Yellow Dark Green Green Brown



Dark Blue Pale Blue



Nominal sheet size: 445 x 303mm (allowing for pinch rollers)
Useable material size: 340 x 240mm (approx.)

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

TA-CER-MIX	Mixed pack of 10 Ceramicon sheets. Two black, one of each other colour.	
TA-CER-COL*	Pack of 10 Ceramicon sheets. All same standard colour.	

Water Release Transfer Paper

Water release transfer paper is ideal for producing decals on non-porous, smooth surfaces, such as ceramics, glass, candles, and plastic. The image is printed onto the transfer paper using a TMT laser printer (see page 118), and then cut using a knife cutting system. It can be used with nearly any CAMM 1, STIKA or Craft ROBO. Once printed, the water release transfer paper is aligned in the machine either automatically (GS-24E, GX-24E, CX-24EO or the Craft ROBO-TS), or manually (this is made easier by using the TechSoft Alignment Guide supplied in Training Packs). Once cut the paper is placed in water and the transfer is removed from its backing. Position the transfer onto the substrate removing any bubbles and wrinkles with a decal kidney (see below). Allow the transfer to dry for a minimum of 3 hours. If applied onto ceramic or glass the transfer can be cured by placing the object into an oven for 3 minutes at 180°C.



Water release transfer paper is available in clear (C) and white (W) A4 sheets.

*** When ordering, where CW is included in the order code, please change this to specify whether clear or white is required.**

TAWRP-10-CW*	10 A4 sheets water release transfer paper	
TAWRP-50-CW*	50 A4 sheets water release transfer paper	
TAWR-DK	Decal Kidney (rubber squeegee) (For applying Water Release Transfers)	

Knife Cutting

Materials

Cutronic Foil for PCBs

Cutronic foil is a real copper foil with a self-adhesive backing which can be cut by the CAMM 1 or STIKA. This has got to be the quickest, cleanest way of making simple PCBs. Designs created in 2D PCB can be cut, and applied to any clean surface. It's as easy as vinyl sign making, you even use the same application film to ensure accurate alignment.



Any substrate capable of surviving soldering heat may be used including card and plastics. With Cutronic Foil you do not have to make and house a circuit board, the circuit can be an integral part of the artifact.

Cutronic Foil is also available in rolls 5mm wide, ideal for producing simple "hand built" circuits.

TA-FOIL-R200	55m x 200mm roll Cutronic Foil	
TA-FOIL-R5	55m x 5mm roll Cutronic Foil	
TA-FOIL-SHEET	10 sheet pack, 300 x 200mm Cutronic Foil	

Heat Presses

See page 122 for full details



We supply a range of heat presses which can be used for applying heat applied materials (vinyls, etc) as well as for image transfer (see pages 118-123). Some heat applied vinyl and flock can be transferred with a domestic iron, but one of these presses makes it a quick production process. See page 122 for full details.

SLM-HPR1	Pink A4 Heat Press (310 x 220mm). Includes 2 x PTFE sheets each 250 x 190mm	
SLM-SWINGPRESS	A3+ Swing Press (380 x 500mm). Includes 2 PTFE sheets each 380 x 500mm	
SLM-SWINGPR2	Deep A3+ Swing Press (380 x 500mm). Press items up to 25mm thick. Includes 2 PTFE sheets each 380 x 500mm	
SLM-CAPPRESS2	Cap/Pocket Combi Press	

Baseball Caps for Heat Applied Vinyl

Ideal for applying knife cut designs in iron-on coloured vinyl, iron-on flock or iron-on printable vinyl, with the cap press (see page 117).

Available in black, green, navy blue, red, yellow, or royal blue

* Please specify colour required



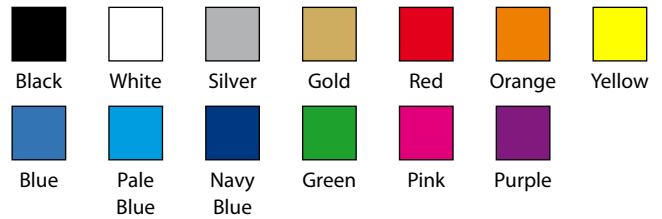
LIT-CAP10-COL*	10 Baseball Caps. All same colour. (Available in black, green, navy blue, red, yellow or royal blue)	
-----------------------	--	--

Heat Applied Vinyl

Heat applied coloured vinyl is simple to use and gives superb results on garments. Simply mirror the image, then cut on the CAMM 1, VersaSTUDIO, VersaCamm, TrueVIS, STIKA or CraftROBO - TS as normal. Weed off the excess, lay the material onto the fabric (vinyl down) and fix the image using an iron or, even easier, a heat press. After a few seconds cooling, the paper can be peeled off to reveal a superb professional quality finish. When producing batches of work, a heat press is particularly recommended.



Heat applied vinyl is available in sheets, in a range of colours.



* When ordering, where COL is included in the order code, please change this to specify the actual colour required. (N.B. Colours shown are only an indication.)

355 x 225mm size

TAVI-P2	Mixed pack of 13 heat applied vinyl sheets. One of each colour	
TAVI-10-COL*	10 heat applied vinyl sheets. All same colour	
TAVI-25-COL*	25 heat applied vinyl sheets. All same colour	

450 x 355mm size

TAVJ-P2	Mixed pack of 13 heat applied vinyl sheets. One of each colour	
TAVJ-10-COL*	10 heat applied vinyl sheets. All same colour	
TAVJ-25-COL*	25 heat applied vinyl sheets. All same colour	

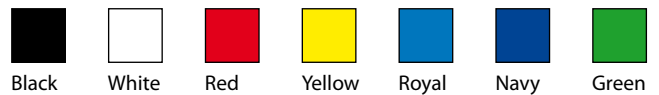
Heat Applied Flock

Do you enjoy using heat applied vinyl but wish it had a little more texture? TechSoft stock a range of flocked vinyl, which gives an extra dimension to your designs. Heat applied flock is available in sheets, in a range of colours.

N.B. Colours shown are only an indication.



Standard Mixed Pack P1



Printed Mixed Pack P2



* When ordering, where COL or PRT is included in the order code, please change this to specify the actual colour or print required.

TAVIF-P1	Mixed pack of 7 standard heat applied flock sheets (Nominal size: 500 x 500mm)	
TAVIF5-5-COL*	5m x 500mm standard heat applied flock	
TAVIF-P2	Mixed pk of 4 printed heat applied flock sheets (Nominal size: 500 x 500mm)	
TAVIF5-5-PRT*	5m x 500mm printed heat applied flock (Available in Snake or Lizard only)	

Heat Applied Glitter Vinyl

Heat applied glitter vinyl is a brand new material that knife cuts easily for heat pressing onto garments and accessories.



TAVIG5-1-COL	1m x 500mm standard colour heat applied glitter vinyl. Available in Black/Silver, Blue, Gold, Jade Green, Light Pink, Multi-coloured, Purple, Red, Silver or White.	
TAVIG5-1-FCOL	1m x 500mm fluorescent coloured heat applied glitter vinyl. Available in Blue, Green, Orange, Pink, Purple or Yellow.	

Heat Applied Gemstones (Preciosa Crystals)

Use 2D Design and a CAMM-1 or miller/router to design and cut out a stencil or template to position the gemstones. Brush the gemstones into the stencil using a felt block before transferring the gemstone design onto your fabric using heat resistant application film. Fix the gemstones by heating with a heat press.



TXCR-H12-AB	Pack of 100 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss12 (3.2mm)	
TXCR-H20-AB	Pack of 100 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss20 (5mm)	
TXCR-H34-AB	Pack of 36 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss34 (7mm)	

Heat Applied Printable Flock (TrueVIS/Eco-Sol ink)

This material is similar to our standard white flock but can be printed by the TrueVIS, VersaSTUDIO or VersaCAMM before cutting around the graphics. The printed and cut flock is then heat applied to a textile garment or product.

TAV-PF5-5	5m x 500mm roll of printable white flock	
------------------	--	--

Heat Application Accessories

TA-TWEEZERS	Set of 4 weeding tweezers	
TAVA-SQ4	100mm felt block squeegee	
TAVN-APH250	25mm x 250mm roll heat resistant polyester application film	

Heat Applied Printable Vinyl

Heat applied vinyl is a popular material for CAD/CAM activities in both Textiles and Graphic Products lessons. This printable, heat applied vinyl material takes the process further. Most standard inkjet and some laser printers will print the image, then the shape of the graphic can be cut using any of our CNC knife-cutters. This print-and-cut process is an excellent technique for teaching CAD/CAM. Print alignment is automatic with GS-24E, GX-24E, CX-24EO or Craft ROBO machines or can be achieved manually with the Stika using the TechSoft Alignment Guide supplied in Training Packs.



For Inkjet Printers (Iron On or Heat Press)

TAVIP-K4-10	10 A4 sheets heat applied printable vinyl	
TAVIP-K4-25	25 A4 sheets heat applied printable vinyl	
TAVIP-K4-50	50 A4 sheets heat applied printable vinyl	
TAVIP-K3-10	10 A3 sheets heat applied printable vinyl	
TAVIP-K3-25	25 A3 sheets heat applied printable vinyl	
TAVIP-K3-50	50 A3 sheets heat applied printable vinyl	

For TMT Laser Printers (Heat Press Only) (see page 118)

TAVIP-L4-10	10 A4 sheets heat applied printable media	
TAVIP-L4-25	25 A4 sheets heat applied printable media	
TAVIP-L4-50	50 A4 sheets heat applied printable media	
TAVIP-L3-10	10 A3 sheets heat applied printable media	
TAVIP-L3-25	25 A3 sheets heat applied printable media	
TAVIP-L3-50	50 A3 sheets heat applied printable media	

For TrueVIS/Eco-Sol Inks Only

This material gives users of TrueVIS, VersaSTUDIO and VersaCAMM machines a one-step process for bespoke printed graphics for garments. TrueVIS/Eco-Sol inks provide sharp colourful images and automatic alignment ensures a perfect fit ready for heat application.



505mm wide (for VersaSTUDIO BN-20)

TAVIP5-5-W	5m x 505mm white heat applied printable vinyl	
TAVIP5-5-C	5m x 505mm clear heat applied printable vinyl	

760mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300i)

TAVIP7-5-W	5m x 760mm white heat applied printable vinyl	
TAVIP7-5-C	5m x 760mm clear heat applied printable vinyl	

1370mm wide (for TrueVIS SG-540, VG-540/640, VersaCAMM SP-540i & VS-540i/640i)

TAVIP13-5-W	5m x 1370mm white heat applied printable vinyl	
TAVIP13-5-C	5m x 1370mm clear heat applied printable vinyl	

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

Canvas for TrueVIS/Eco-Sol Inks

This canvas has a special coating which allows the VersaSTUDIO, VersaCAMM or TrueVIS to print directly onto the surface. You can use this material to produce digital prints of student's art work, school photographs, etc. For a finished product the canvas can then be stretched over a frame.



505mm wide (for VersaSTUDIO BN-20)

TAV-C5-5	5m x 505mm, 340gsm, art canvas	
TAV-C5-10	10m x 505mm, 340gsm, art canvas	
TAV-C5-25	25m x 505mm, 340gsm, art canvas	

760mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300i)

TAV-C7-5	5m x 760mm, 340gsm, art canvas	
TAV-C7-10	10m x 760mm, 340gsm, art canvas	
TAV-C7-30	30m x 760mm, 340gsm, art canvas	

1370mm wide (for TrueVIS SG-540, VG-540/640, VersaCAMM SP-540i & VS-540i/640i)

TAV-C13-5	5m x 1370mm, 340gsm, art canvas	
TAV-C13-10	10m x 1370mm, 340gsm, art canvas	
TAV-C13-30	30m x 1370mm, 340gsm, art canvas	

Card Frame Kits for Canvas

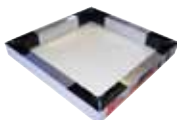
The simple and economical way to achieve professional standards of presentation. Each kit contains a self-adhesive net to which the canvas print is applied. As the net is folded, the canvas print is stretched and a neat box frame is created.



TAV-CF2-A4-10	10 Card Frames for Canvas. Sheet Size A4. Frame Face Size: 131 x 218mm.	
TAV-CF2-A3-10	10 Card Frames for Canvas. Sheet Size A3+ (329 x 412mm). Frame Face Size: 249 x 332mm.	
TAV-CF2-1216-10	10 Card Frames for Canvas. Sheet Size 427 x 528mm. Frame Face Size: 305 x 406mm.	
TAV-CF2-1620-10	10 Card Frames for Canvas. Sheet Size 528 x 628mm. Frame Face Size: 406 x 508mm.	

Aluminium Frame Kits for Canvas

This unique aluminium frame system uses cleverly designed bars which simply stick to the back of your printed canvas and fold together to stretch the canvas and create the frame. Produce professional results without the need for professional know-how.



TAV-CF1-1612	16" x 12" Canvas Frame Kit	
TAV-CF1-2420	24" x 20" Canvas Frame Kit	
TAV-CF1-3024	30" x 24" Canvas Frame Kit	

Roll-Up Stand & Materials for TrueVIS/Eco-Sol Inks

These roll-up stands hold a printed sheet of roll-up material to make an imposing, yet portable, graphic banner ideal for school presentations, etc.

The stands are supplied with a carry bag and one 'quick change' mounting kit to allow quick change of graphics. Extension poles are available to give extra height if required.

N.B. Roll-up material must be ordered separately for VersaSTUDIO BN-20.



250mm wide (for VersaSTUDIO-BN-20)

TAV-BS-M25	250mm wide mini roller blind stand (480mm high)	
TAV-BSP-QCK25	"Quick-change" Mounting Kit 250mm for TAV-BSP-M25	
TAV-BS3-10	10m x 300mm matt roll-up material	
TAV-BS3S-10	10m x 300mm satin finish roll-up material	

600mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS300i)

TAV-BS-P60	600mm wide roller blind stand (1.86m high)	
TAV-BSP-QCK60	"Quick-change" Mounting Kit 600mm for TAV-BS-P60	
TAV-BS-EP	38cm Extension Pole for TAV-BS-P60	
TAV-BS7-10	10m x 760mm matt roll-up material	
TAV-BS7S-10	10m x 760mm satin finish roll-up material	

880mm wide (for TrueVIS SG-540, VG-540/640 & VersaCAMM SP-540i, VS-540i/640i)

TAV-BS-P88	880mm wide roller blind stand (2.12m high)	
TAV-BSP-QCK88	"Quick-change" Mounting Kit for TAV-BS-P88	
TAV-BS-EP	38cm Extension Pole for TAV-BS-P88	
TAV-BS-H88	Hard Case on Wheels 880mm (for TAV-BS-P88)	
TAV-BS9-10	10m x 914mm matt roll-up material	
TAV-BS9S-10	10m x 914mm satin finish roll-up material	
TAV-BS10S-10	10m x 1070mm satin finish roll-up material	

Wallpaper for TrueVIS/Eco-Sol Inks

Ideal for interior design projects and eye-catching décor, this high quality paper accepts TrueVIS/Eco-Sol ink for faithful colour reproduction. Print durability and wet-strength is good meaning it can be pasted and hung in the same way as 'regular' wallpaper. The wallpaper is non-adhesive and 350gsm weight.



650mm wide (for TrueVIS SG-300, VersaCAMM SP-300i & VS-300)

TAV-W7-12-M	12m x 650mm smooth wallpaper	
TAV-W7-25-M	25m x 650mm smooth wallpaper	

1300mm wide (for TrueVIS SG-540, VG-540 & VersaCAMM SP-540i, VS-540)

TAV-W13-12-M	12m x 1300mm smooth wallpaper	
TAV-W13-25-M	25m x 1300mm smooth wallpaper	

Banner Material

Banner material can be printed on TrueVIS machines to produce professional quality banners, for use around the school. Printed banners can be used to advertise school and sporting events, etc.



505mm wide (for VersaSTUDIO BN-20)

TAV-B5-10	10m x 505mm banner (440gsm)	
TAV-B5-30	30m x 505mm banner (440gsm)	

760mm wide (for TrueVIS SG-300, VersaCamm SP-300i & VS-300i)

TAV-B7-10	10m x 760mm banner (440gsm)	
TAV-B7-30	30m x 760mm banner (440gsm)	

1370mm wide (for TrueVIS SG-540, VG-540/640 & VersaCamm SP-540i, VS-540i/640i)

TAV-B13-10	10m x 1370mm banner (440gsm)	
TAV-B13-30	30m x 1370mm banner (440gsm)	

Banner Accessories

Everything you need to ensure that banners produced on your TrueVIS, VersaSTUDIO BN-20 or VersaCamm are finished as smartly as they are printed and don't blow away in the wind. Banner tape is important to finish and reinforce edges – particularly in exposed locations.



TAV-EP1	Hand Operated Eyelet Press c/w set of fitting dies	
TAV-EY100	100 Brass Eyelets (11mm internal hole)	
TAV-EY1000	1000 Brass Eyelets (11mm internal hole)	
TAV-BT3	25m x 50mm Roll of Banner Hemming Tape	

Printable Magnetic and Ferrous Material

For TrueVIS, VersaSTUDIO and VersaCamm users, these new materials accept TrueVIS/Eco-Sol inks for great print quality and high durability.

Printable Magnetic Vinyl is ideal for removable signage, eg., fridge magnets or temporary vehicle graphics. Self-adhesive Ferrous Film can be applied to any surface to make it receptive to magnetic vinyl.

A similar (but opposite) effect could use Self-Adhesive Magnetic Film to 'magnetise' a wall or display board. Posters, banners and notices are then printed onto Printable Ferrous Paper and attached or re-arranged at will. No wrinkles and no pins or tape needed! All these materials are tough and durable so any cutting needs to be done manually.

Printable Magnetic Material on Self-Adhesive Ferrous Material

TAVPMF10-5	5m x 1000mm printable white faced magnetic film. <i>Can be used in conjunction with TAVFF10-6.</i>	
TAVFF10-6	6m x 1010mm self-adhesive ferrous film. <i>Can be used in conjunction with TAVPMF10-5.</i>	

Printable Ferrous Material on Self-Adhesive Magnetic Material

TAVPFF12-5	5m x 1260mm printable white faced ferrous paper. <i>Can be used in conjunction with TAVMF12-5.</i>	
TAVMF12-5	5m x 1250mm self-adhesive magnetic film. <i>Can be used in conjunction with TAVPFF12-5.</i>	

Materials Packs

These packs have been created by popular demand to take the hassle out of ordering, and to give a modest cost saving overall. Each pack contains a generous selection of materials particularly suited to, and in exactly the right size for the machine listed. Ideal as a basic stock, for back-up and for developing projects using different materials. We have included our special High/Low tack tape for making backing sheets, where card cutting is appropriate.

For Stika

TPM-SV8	Mixed Materials Pack for SV-8E <i>(Save £5)</i> Contains coloured vinyl (TAVN2-P1, TAVN2-P2); iron-on vinyl (TAVI-P2); self-adhesive paper (TASP-100); tweezers (TA-TWEEZERS)	
TPM-SV12	Mixed Materials Pack for SV-12E <i>(Save £7)</i> Contains coloured vinyl (TAVN3-P1, TAVN3-P2); iron-on vinyl (TAVI-P2); self-adhesive paper (TASP-100); tweezers (TA-TWEEZERS)	
TPM-SV15	Mixed Materials Pack for SV-15E <i>(Save £7)</i> Contains coloured vinyl (TAVN4-P1, TAVN4-P2); iron-on vinyl (TAVI-P2); self-adhesive paper (TASP-100); tweezers (TA-TWEEZERS)	

For Camm 1

TPM-GX24	Mixed Materials Pack for GS-24E/GX-24E <i>(Save £10)</i> Contains coloured vinyl (TAVN5-P1, TAVN5-P2); heat applied vinyl (TAVJ-P2); card (CA049); tweezers (TA-TWEEZERS); High/Low tack tape (TA-TAPE-KC)	
-----------------	---	--

For VersaSTUDIO

TPM-BN20	Mixed Materials Pack for BN-20 <i>(Save £10)</i> Contains white vinyl (TAVU5-25-W); clear vinyl (TAVU5-25-C); peelable white vinyl (TAV-PV4-5-G); heat applied clear printable vinyl (TAVIPS-5-C); poster paper (TAV-DPB5-15); art canvas (TAV-C5-5); card (TAV-C3020-50); high/low take tape (TA-TAPE-KC); tweezers (TA-TWEEZERS); float-on vinyl application liquid (TAVA-VAL)	
-----------------	---	--

For TrueVIS & VersaCamm

TPM-SP300	Mixed Materials Pack for TrueVIS SG-300 & VersaCamm SP-300i, VS-300i <i>(Save £15)</i> Contains white vinyl (TAVU7-25-W); clear vinyl (TAVU7-25-C); peelable white vinyl (TAV-PV7-5-G); clear heat applied printable vinyl (TAVIP7-5-C); poster paper (TAV-DPB7-15); art canvas (TAV-C7-5); card (TAV-C3020-50); high/low take tape (TA-TAPE-KC); tweezers (TA-TWEEZERS); float-on vinyl application liquid (TAVA-VAL)	
TPM-SP540	Mixed Materials Pack for TrueVIS SG-540, VG-540/640 & VersaCamm SP-540i, VS-540i/640i <i>(Save £15)</i> Contains white vinyl (TAVU13-25-W); clear vinyl (TAVU13-25-C); peelable white vinyl (TAV-PV13-5-G); clear heat applied printable vinyl (TAVIP13-5-C); poster paper (TAV-DPB13-15); art canvas (TAV-C13-5); card (TAV-C3020-50); high/low take tape (TA-TAPE-KC); tweezers (TA-TWEEZERS); float-on vinyl application liquid (TAVA-VAL)	

For CraftROBO & CraftROBO Pro

TPM-CR	Mixed Materials Pack for Craft ROBO <i>(Save £7)</i> Contains coloured vinyl (TAVN21-P1, TAVN21-P2); heat applied vinyl (TAVI-P2); card (CA046); tweezers (TA-TWEEZERS); High/Low tack tape (TA-TAPE-KC)	
TPM-CRP	Mixed Materials Pack for Craft ROBO Pro <i>(Save £10)</i> Contains coloured vinyl (TAVN4-P1, TAVN4-P2); heat applied vinyl (TAVJ-P2); card (CA049); tweezers (TA-TWEEZERS); High/Low tack tape (TA-TAPE-KC)	

Knife Cutting

Accessories and Consumables

Knife Cutting High/Low Tack Tape

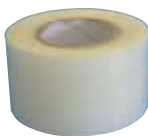
TechSoft's High/Low tack double sided tape can be applied to a piece of card to create a low tack backing sheet. This can be quickly and effortlessly attached prior to cutting and removed after the card product has been cut/scored/creased. The low tack backing sheet can then be reused many times and you can make several backing sheets to increase the throughput on the knife cutting machine.



TA-TAPE-KC	High/Low tack tape 12mm x 50m	
-------------------	-------------------------------	--

Application Film

Application film is used to keep separate pieces of a design, or characters in a piece of text, correctly aligned. Once the design is cut and the unwanted areas 'weeded' out, the film, which has a low tack adhesive layer, is placed over the design which can then be lifted off in one piece. The complete design is then rubbed down wherever it is required and the application film peeled off.



MF-RO50-APP	100m x 83mm roll application film	
TAVN-AP150	100m x 150mm roll application film	
TAVN-AP450	100m x 450mm roll application film	

Heat Resistant Application Film

Ideal for transferring printable iron-on vinyl and gemstone designs.

TAVN-APH500	25m x 500mm roll heat resistant application film	
--------------------	--	--

Weeding Tweezers

Needle-point tweezers, the stress-free way to lift edges and weed out fine details



TA-TWEEZERS	Set of 4 weeding tweezers	
--------------------	---------------------------	--

Safety Rulers

Vinyl is best cut to size with a sharp craft knife. These rulers have a non-slip base and a wedge-shaped 'barrier' profile to keep fingers well away from the cutting edge.



TAVA-RL50	500mm Yellow Safety Ruler	
TAVA-RL100	1000mm Yellow Safety Ruler	
TAVA-RL150	1500mm Yellow Safety Ruler	

Vinyl Clip

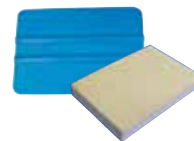
A simple device to avoid part-used rolls unravelling and wasting material. Doesn't crease or damage the material which would happen with elastic bands or bits of tape.



TAVA-CLP	Vinyl Roll Clip	
-----------------	-----------------	--

Applicators

Application tape and vinyls need to be applied with even pressure. These applicators will ensure good adhesion without wrinkles and bubbles. Felt-edged applicators are essential to prevent scratching when applying printed vinyls, for example from TrueVIS machines.



TAVA-SQ5	Blue plastic squeegee	
TAVA-SQ4	100mm felt block squeegee	
TAVA-SQ3	95mm felt edged plastic squeegee	
TAVA-SQ1	160mm felt edged plywood squeegee	
TAVA-SQ2	270mm felt edged plywood squeegee	

Cleaning Kits for TrueVIS, BN-20 & VersaCAMM

RLP-VC-CLEANKIT	Cleaning Kit - 1 bottle of solution and 10 swabs	
------------------------	--	--

Application Liquid

Vinyl tends to 'grab' the substrate which makes positioning difficult and it can be tricky to avoid bubbles. Spray this liquid on first and you will be able to float the vinyl into position - then use an applicator to fix it and remove air bubbles. Takes the drama out of applying larger designs (in particular) and evaporates without residue.



TAVA-VAL	Float-On Vinyl Application Liquid (1 litre container with spray trigger)	
-----------------	--	--

Anti-Static Cleaner

The perfect preparation for substrates prior to applying vinyl. Ensures perfect adhesion by removing particles and traces of grease or wax. The anti-static formulation prevents dust being attracted to the prepared surface.



TAVA-ASC	Anti-Static Cleaner (500ml container with spray trigger)	
-----------------	--	--

Universal Adhesive Remover

Removes adhesive residue when vinyl is removed from a surface. Does not damage the surface and works within 2 minutes. A low-hazard liquid so friendly to use.



TAVA-AR	Right-Off Universal Adhesive Remover (1 litre container with spray trigger)	
----------------	---	--

Cutters and Holders

For Roland Stika, CAMM 1, VersaSTUDIO, TrueVIS and VersaCMM

Standard Cutter

Replacement general-purpose cutters for all Roland knife-cutting machines. These solid carbide inserts slip into the blade holder to restore 'as new' cutting performance.

TA-CMC	Standard Carbide Cutter x 1	
TA-CMC-5	Standard Carbide Cutter x 5	

Extra Sharp Cutter

This extra sharp fine pointed cutter is useful for intricate detail on thicker materials. It requires a much lower force than the standard cutter. (Not suitable for scoring.)

TA-CMCH	Extra Sharp Cutter for thick materials only.	
---------	--	--

Cutter Holder

Cutter holders do not usually wear but they can get lost!

XD-CH3	Replacement Cutter Holder (exc. cutter)	
--------	---	--

Creasing Tools

These creasing tools are ideal for making the folds in nets.

For Roland CAMM1, VersaSTUDIO, TrueVIS and VersaCMM

TA-FOLDTOOL	Creasing Tool for CAMM 1	
-------------	--------------------------	--

Bed Strips

After a lot of use, the plastic strip below where the blade runs can become scored giving inconsistent results. These replacement bed strips are simple to fit and can transform the performance of a well-used machine.

RPL-BED-SV8	Bed Strip for SV-8/SX-8	
RPL-BED-SV12	Bed Strip for SV-12/SX-12	
RPL-BED-SV15	Bed Strip for SV-15/SX-15	
RPL-BED-GS24	Bed Strip for GS-24	
RPL-BED-GR420	Bed Strip for GR-420	
RPL-BED-GR540	Bed Strip for GR-540	
RPL-BED-GR640	Bed Strip for GR-640	
RPL-BED-BN20	Bed Strip for BN-20	
RPL-BED-SG300	Bed Strip for SG-300	
RPL-BED-SG540	Bed Strip for SG-540	
RPL-BED-VG540	Bed Strip for VG-540	
RPL-BED-VG640	Bed Strip for VG-640	

N.B. Bed strips for older models can be found on our website at www.techsoft.co.uk/Products/KnifeCuttingToolsAccessories/BedStrips

CraftROBO Accessories and Materials

See www.techsoft.co.uk/Products/KnifeCuttingToolsAccessories & www.techsoft.co.uk/Products/KnifeCuttingMaterials for details.

Plotter Paper / Pens

See page 43 for details.

Ink Cartridges

* When ordering, where COL is included in the order code, please specify colour required.

TrueVIS Ink (for TrueVIS)

The latest print and cut machines from Roland work with special TrueVIS ink, to deliver beautiful images and uniform colours at production speeds. They last up to 3 years outdoors with no lamination and dry times are superfast. The inks are Greenguard Gold Certified.



RPL-TVI-COL*	500cc TrueVIS Ink Cartridge. Available in Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta, Light Black.	
RPL-TVI-W	500cc White TrueVIS Ink Cartridge.	
RPL-TVI-CC	500cc TrueVIS Cleaning Cartridge.	

Eco-Sol Inks (for VersaCMM & VersaStudio)

Roland are constantly developing and improving their eco-solvent inks, so there are now three different inks available - Eco-Sol Max, Eco-Sol Max2 and Eco-Sol Max3. **It is important that you select the appropriate ink for your machine.** All cartridges are clearly labelled, so unless you wish to upgrade your machine, please choose the ink-type currently in use.

N.B. Most older machines can be upgraded to use Eco-Sol Max3 ink if desired - the upgrade involves updating software and firmware as well as doing a special cleaning routine. All cartridges must be changed at the same time. For further details see: www.techsoft.co.uk/Products/KnifeCuttingToolsAccessories/InkCartridges

Eco-Sol Max3 Ink

Eco-Sol Max3 is the latest in a range of eco-solvent inks from Roland for VersaCMM and VersaSTUDIO. The ink offers even better overall performance with even faster drying times, bigger cartridges and a lower price per ml of ink. Eco-Sol Max3 is now supplied with all new VersaSTUDIO machines. Eco-Sol Max3 is available in six colours: cyan, magenta, yellow, black, light cyan, light magenta and light black. (For white or metallic, use Eco-Sol Max2 cartridges with these.)



RPL-VS-I3-COL*	220ml Eco-Sol Max3 for the latest (or updated) VersaSTUDIO or VersaCMM. Available in Black, Cyan, Magenta or Yellow.	
RPL-VC-I3-COL*	500ml Eco-Sol Max3 for the latest (or updated) VersaCMM. Available in Black, Cyan, Magenta or Yellow. Also Light Cyan, Light Magenta and Light Black for VersaCMM VSi 7 or 8 colour configuration.	
RPL-VC-I2-CC	220cc Cleaning Cartridge for use with Eco-Sol Max2 and Eco-Sol Max3 Inks	

Eco-Sol Max2 Metallic and White Ink

RPL-VC-I2-MT	220cc Metallic Eco-Sol Max2 Ink Cartridge for VersaCMM VSi and VersaStudio. (Use with Max2 or Max3 colour cartridges only)	
RPL-VC-I2-W	220cc White Eco-Sol Max2 Ink Cartridge for VersaCMM VSi and VersaStudio. (Use with Max2 or Max3 colour cartridges)	

Original Eco-Sol Max Ink

Eco-Sol Max ink is the original eco-solvent ink.



RL254-COL*	220ml Eco-Sol Max. Available in Black, Cyan, Magenta and Yellow. Also Light Cyan or Light Magenta for VersaCMM 6 or 8 colour configuration.	
RL260-COL*	440ml Eco-Sol Max for VersaCMM only. Available in Black, Cyan, Magenta and Yellow. Also Light Cyan or Light Magenta for VersaCMM 6 or 8 colour configuration.	
RL254-MS	220ml Eco-Sol Max, Metallic Silver. N.B. Can only be used in VersaSTUDIO 5 colour metallic or VersaSTUDIO 8 colour configuration.	
RL266	220ml Cleaning Cartridge. Please specify ink to be used with.	
RPL-VS-WCOL	Waste Collection Unit for VersaSTUDIO BN-20.	

Wire Bending



The World's first Desktop CNC Wire Bender

What is a D.I.Wire?

The D.I.Wire is a small machine that bends wire into elaborate shapes by following simple vector drawings. The bent wires can then be assembled to make just about any 3D structure.

Ease of Use

First design the shape you require in any design software that outputs .dxf or .svg files – TechSoft 2D Design is ideal (see page 12). Next, drag and drop the file into the Wireware software provided. (Alternatively, script mode can be used to create complex programs using conversational script or G-code.)

Wireware tells you the length of the wire needed and detects any points in the image that the machine cannot bend. Simply connect the D.I.Wire to your computer with a USB cable, load the wire and then press "Bend" in the software to bend your shape in just minutes.

How Does It Work?

Wire is loaded into one end, where a series of feeding rollers ensure it's straight before sending it to a bending head. The machine is capable of forming curves and angles up to 135° (180° for D.I.Wire Pro) while rotating the wire in any direction, giving users freedom in their designs.

Creative Designs

Individual bent wires can be soldered or clipped together to create fantastic 3D structures. D.I.Wire provides endless possibilities for Art and Design students.

D.I.Wire Pro

The new D.I.Wire Pro can work with heavier materials (up to 4.8mm) and can form tighter bend radii with closer parallels, and overlapping shapes such as springs and helices. D.I.Wire Pro bridges the gap between time-consuming hand-bending and expensive large-scale, mass production CNC wire bending.

Specification		
	D.I.Wire Plus	D.I.Wire Pro
Dimensions:	241(W) x 368(D) x 171(H)mm	410(W) x 290(D) x 330(H)mm
Weight:	10.8 kg	45.3 kg
Diameter Range:	1.6 mm to 3.2mm	0.7 mm to 4.8mm
Materials:	Steel, Stainless Steel, Aluminium, Brass, Copper, Cold Bend Plastic	Variety of Steels, Aluminium, Brass, Jacketed Wire, Copper, Cold Bend Plastic and more
Maximum Bend Angle:	135°	180°
Interface:	USB	USB

Whats Included?	
Software	D.I.Wire Wireware 2.0 Software. Imports DXF and SVG files to output to the wire bender.
Warranty	UK Mainland & Ireland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
TM-DW18	D.I.Wire Plus CNC Wire Bender. Includes 1/8" bend head and feed wheels and D.I.Wire Wireware software	
TM-DWPRO	D.I.Wire Pro CNC Wire Bender. Includes one bend head/ring and one set of feed wheels made-to-order, allen wrench, torque wrench, bolt cutter, calibration plate, sample fixture clips and D.I.Wire Wireware software	
Rods		
TAW3-PK1	Mixed Pack of 10 rods, 3m length, diameter 1/8". 4 bright mild steel, 3 brass, 3 aluminium	
TAW3-BMS8-10	Pack of 10 Bright Mild Steel Rods 1/8" diameter, 3m length.	
TAW3-BR8-10	Pack of 10 Brass Rods 1/8" diameter, 3m length.	
TAW3-AL8-10	Pack of 10 Aluminium Rods 1/8" diameter, 3m length.	
Clips		
TMP-DW-PCC100	Pack of 100 Pre-Cut Parallel Joint Clips Cut to 3/8"	
TMP-DW-UCC10	Pack of 10 Uncut Parallel Joint Clips 12" long	
TMP-DW-UMC10	Pack of 10 Universal Metal Clips Metal fixture clips for 1/8" wire	
Wire Cutters		
TMP-DW-MBC	D.I.Wire Mini Wire/Bolt Cutters 8-inch Lever Action Mini-Bolt Cutter with Notch	
Recommended Software 2D Design V2 (page 12)		

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
Robox							
Robox	53	£	210 x 150 x 100mm	0.02mm	PETG/PLA/ABS/Other	No	Manual
RoboxDual	53	£	210 x 150 x 100mm	0.02mm	PETG/PLA/ABS/Other	Yes	Manual/Soluble
RoboxPro	53	£	300 x 200 x 400mm	0.05mm	PETG/PLA/ABS/Other	Yes	Manual/Soluble
Witbox							
Witbox 2	54	£	297 x 210 x 200mm	0.02mm	PLA / Flexible	No	Manual
Ultimaker							
Ultimaker 2+	55	£	223 x 223 x 205mm	0.02mm	PLA/ABS/Other	No	Manual
Ultimaker 2 Extended+	55	£	223 x 223 x 305mm	0.02mm	PLA/ABS/Other	No	Manual
Ultimaker 3	55	£	197 x 215 x 200mm	0.02mm	PLA/ABS/Other	Yes	Manual/Soluble
Ultimaker 3 Extended	55	£	197 x 215 x 300mm	0.02mm	PLA/ABS/Other	Yes	Manual/Soluble
MakerBot							
Replicator Mini+	56	£	126 x 101 x 126mm	0.1mm	PLA	No	Manual
Replicator+	56	£	295 x 195 x 165mm	0.1mm	PLA	No	Manual
Replicator Z18	56	£	305 x 300 x 457mm	0.1mm	PLA	No	Manual
Roland							
ARM-10	57	£	130 x 70 x 70mm	0.1mm	UV Resin	No	Manual
Stratasys Mojo							
Mojo	58	£	127 x 127 x 127mm	0.178mm	ABS Plus	Yes	Soluble
Stratasys uPrint							
uPrint SE	58	£	203 x 152 x 152mm	0.245mm	ABS Plus	Yes	Soluble
uPrint SE Plus	58	£	203 x 203 x 152mm	0.254 / 0.33mm	ABS Plus	Yes	Soluble

Machine	Page	Price	Warranty	Enclosed	Connection	Software Provided (stl to manufacture)
Robox						
Robox	53	£	2 Year Return to Base	Yes	USB	Automaker
RoboxDual	53	£	2 Year Return to Base	Yes	USB	Automaker
RoboxPro	53	£	2 Year Return to Base	Yes	USB/Ethernet/WiFi	Automaker
Witbox						
Witbox 2	54	£	2 Year Return to Base	Yes	USB	Cura
Ultimaker						
Ultimaker 2+	55	£	1 Year Return to Base	No	SD Card	Ultimaker Cura
Ultimaker 2 Extended+	55	£	1 Year Return to Base	No	SD Card	Ultimaker Cura
Ultimaker 3	55	£	1 Year Return to Base	No	USB Stick/Ethernet/WiFi	Ultimaker Cura
Ultimaker 3 Extended	55	£	1 Year Return to Base	No	USB Stick/Ethernet/WiFi	Ultimaker Cura
MakerBot						
Replicator Mini+	56	£	1 Year Return to Base	No	USB/WiFi	MakerBot Print
Replicator+	56	£	1 Year Return to Base	No	USB/Ethernet/WiFi	MakerBot Print
Replicator Z18	56	£	1 Year Return to Base	Yes	USB/Ethernet/WiFi	MakerBot Print
Roland						
ARM-10	57	£	1 Year On-Site	Yes	USB	monoFAB Player AM
Stratasys Mojo						
Mojo	58	£	1 Year Return to Base	Yes	USB	Print Wizard
Stratasys uPrint						
uPrint SE	58	£	1 Year Return to Base	Yes	Ethernet	Catalyst EX
uPrint SE Plus	58	£	1 Year On-Site	Yes	Ethernet	Catalyst EX

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.

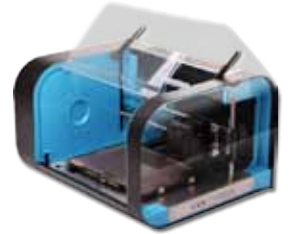


AutoMaker™



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 150mm
 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

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)

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: USB Cable, USB Stick, Ethernet & WiFi
 Dimensions: 510(W) x 510(D) x 610(H)mm
 Weight: TBC

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.



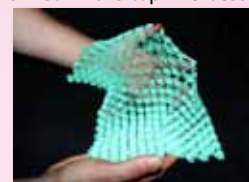
Specifications

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.
---------------	--

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)
----------------------	---

Standard PLA Filament

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

Flexible Filament

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

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.
------------------------	--

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
------------------	----------------------------------

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)

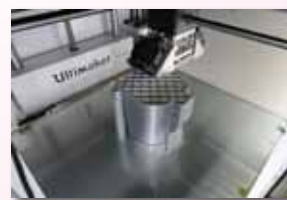
Ultimaker 2+ & 2 Extended+ 3D Printers



The Ultimaker 2+ 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+.

Specification

Max build size: 223 x 223 x 205mm (Ultimaker 2+)
223 x 223 x 305mm (Ultimaker 2 Extended+)
No. Extruders: 1
Model Material: PLA, ABS and more (see page 61)
Min Slice Resolution: 0.02mm (20 microns)
Interface: SD Card
Dimensions: 342(W) x 493(D) x 588(H)mm (Ultimaker 2+)
342(W) x 493(D) x 688(H)mm (Ultimaker 2 Extended+)
Weight: 11.3kg (Ultimaker 2+)
12.3kg (Ultimaker 2 Extended+)



Prices £*

*See Pricing Information on page 2

Ultimaker 3D Printers

MP-UM2P	Ultimaker 2+ 3D Printer	
MP-UM2PE	Ultimaker 2 Extended+ 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 Stratasy (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. Replicator Mini+ and MakerBot Replicator+ models have 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, and Replicator+ and Replicator Z18 models also include the option for wired ethernet connectivity.



MakerBot Replicator Mini+

The MakerBot Replicator Mini+ is engineered for simple and accessible desktop 3D printing, coupled with lasting reliability. Combined with MakerBots guided wireless setup and connected workflow tools, the Replicator Mini+ makes desktop 3D printing streamlined, portable and easy to integrate.



Specification

Max build size: 126 x 101 x 126mm
 No. Extruders: 1
 Model Material: PLA Filament
 Slice Resolution: 0.1mm (100 microns)
 Interface: USB, WiFi
 Dimensions: 349(W) x 295(D) x 381(H)mm
 Weight: 9.3kg

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

Prices £*

*See Pricing Information on page 2

MakerBot 3D Printers

TM-MBMCP	MakerBot Replicator Mini+ Compact 3D Printer
TM-MBRP	MakerBot Replicator+ 3D Printer
TM-MBZ18	MakerBot Replicator Z18 3D Printer

Materials

For Materials see page 61.

Recommended Software

SOLIDWORKS (page 18)



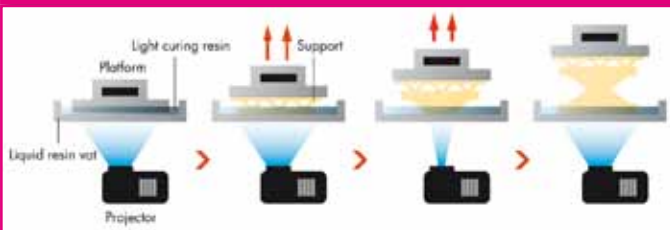
New 3D Printer from Roland

What is an ARM-10?

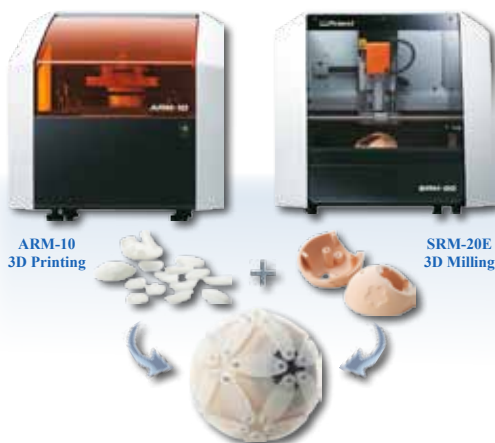
The Roland ARM-10 is a revolutionary new 3D-printing device that builds smooth, precise models using photo-sensitive imageCure liquid acrylic resin. The machine is driven by included software that accepts 3D .stl files and converts them into a series of slices that build to complete the model. Models 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. <i>Save £22</i>
---------------------	---

Machine Only

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

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
------------------------	--------------------------------------

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
---------------------	---------------------------

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

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
-----------------	--------------------------------

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

Recommended Extras

TF-WS3-C2	TechSoft Mobile Workstation for Mojo 1400x800x850mm
------------------	---

TF-WS4-C1	Wheeled Stand/Cupboard 700x800x850mm for uPrint SE or uPrint SE Plus
------------------	--

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 a 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)
---------------------	--

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 Biphenyl 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, 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-RBXMP-COL*	Robox Reel of PLA Filament.	
-----------------------	-----------------------------	--

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 deep purple, but as it warms it changes colour to light pink – perfect when printing wearable items such as necklaces and wrist straps, bath thermometers, children's toys, etc.

TMP-RBXMSH-WB	Robox Half Reel of 7.75mm Woody Beech PLA Filament (0.35kg, 120m).	
TMP-RBXMS-TC	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.	
------------------------	---	--

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).	
---------------------	--	--

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

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.	
---------------------	-----------------------------	--

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-RBXMSH-SUP	Robox Half Reel of Breakaway Support Filament (0.35kg, 120m).	
-----------------------	---	--

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

Robox Accessories

Upgrade to Dual Material Head

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

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	70ml 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	

Wireless Control

TMP-RBX-RT1	Robox Root	
TMP-RBX-MT1	Robox Mote	
TMP-RBX-SD1	Robox Root SD Card v1	

Stands

SF-RBX3-BI	3 Shelf Birch Tree for Robox, 430 x 430 x 1100mm (Normally used for 2 machines)	
SF-RBX5-BI	5 Shelf Birch Tree for Robox, 430 x 430 x 1600mm (Normally used for 4 machines)	
SF-RBXP-STD1	3D Printer Filament Storage Cabinet	

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

Speciality PLA Filaments

TMP-MBS2-COL*	MakerBot Speciality PLA Filament Small Reel (0.2kg). Available in Ocean Blue, Light Brown, Khaki, Army Green, Peach.	
TMP-MBS-COL*	MakerBot Speciality PLA Filament Large Reel (0.9kg). Available in Ocean Blue, Light Brown, Khaki, Army Green, Peach.	
TMP-MBS2-GD	MakerBot Special PLA Filament Small Reel (0.2kg). Glow in the Dark.	
TMP-MBS-GD	MakerBot Special PLA Filament Large Reel (0.9kg). Glow in the Dark.	

Tough PLA

TMP-MBP-PK1	Tough PLA Bundle for Replicator/Replicator+	
TMP-MBP-PK2	Tough PLA Bundle for Replicator Z18	

MakerBot Accessories

For Replicator Mini+

TMP-MB-PLATE4	Replicator Mini Build Plate	
TMP-MB-TAPE2	Pk of 10 Replicator Mini Build Plate Tape	
TMP-MB-GREASE1	3 Grease Packets	
TMP-MB-EXT3	Smart Extruder+ for Replicator, Replicator+, Replicator Mini, Replicator Mini+	

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+	

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	

Ultimaker Materials

PLA Filament

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

ABS Filament

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

CPE (PET) Filament

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

Polycarbonate Filament

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

CPE-TR Filament

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

Nylon Filament

TMP-UMMN	750g Reel of Nylon Filament. Available in Black or Transparent.	
-----------------	---	--

TPU (Flex) Filament

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

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	
-------------------	-------------------	--



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

3D Printing

Stratasys Materials for Mojo and uPrint

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)	
--------------------	---	--

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	

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-COL5*	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	
-------------------	--------------------------------------	--

Model Material



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)	
--------------------	---	--

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	

For uPrint (purchased before 2011)

TMP-UPR-SUP	Support Spool (491cc) for uPrint	
--------------------	----------------------------------	--

Model Bases for Stratasys FDM 3D Printers



For Mojo

TMP-MJ-BASE	24 Plastic Bases for Mojo (127 x 127mm)	
--------------------	---	--

For uPrint SE and uPrint

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

For uPrint SE Plus

TMP-UPRP-BASE24	24 Plastic Bases for uPrint SE Plus (203 x 203mm)	
------------------------	---	--

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 special 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

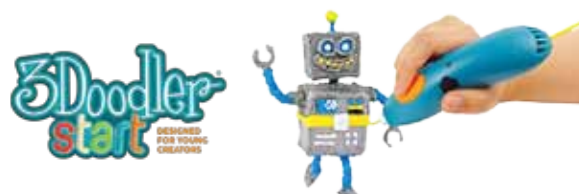
FLEXY - for creating moving joint/parts with maximum stretch

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. Includes 12 3Doodler Create Pens, 1200 filament strands, 12 Create DoodlePads, 4 Nozzle sets, 2 JetPacks, 2 project books, 1 3Doodler General EDU booklet, 3 User manuals, 6 Quick Start Guides, 1 USB stick, 24 stickers, 6 unblocking tools, 6 nozzle remover tools, 12 screwdrivers.		
AR-3DP2-PK2	3Doodler Create Half Education Bundle. Includes 6 3Doodler Create Pens, 600 filament strands, 6 Create DoodlePads, 2 Nozzle sets, 1 JetPack, 1 project book, 1 3Doodler General EDU booklet, 3 User manuals, 3 Quick Start Guides, 1 USB stick, 12 stickers, 6 unblocking tools, 3 nozzle remover tools, 6 screwdrivers.		
Single Pen			
AR-3DPEN2	3Doodler Create, 3D Printing Pen c/w pack of PLA and ABS filament		
Mixed Colour Packs			
AR-3DP2P25MP-COL	Mixed Colour Pack of 25 PLA 3mm filament for 3Doodler. Available in 8 colour sets - see website for details.		

AR-3DP2A25MP-COL	Mixed Colour Pack of 25 PLA 3mm filament for 3Doodler. Available in 3 colour sets - see website..	
Single Colour Packs		
AR-3DP2P25-COL	Pack of 25 PLA 3mm filament for 3Doodler all the same colour. Available in 39 colours - see website.	
AR-3DP2A25-COL	Pack of 25 ABS 3mm filament for 3Doodler all the same colour. Available in 15 colours - see website.	
AR-3DP2P100-COL	Pack of 100 PLA 3mm filament for 3Doodler all the same colour (packed in a tube). Available in 39 colours - see website for details.	
AR-3DP2A100-COL	Pack of 100 ABS 3mm filament for 3Doodler all the same colour (packed in a tube). Available in 15 colours - see website for details.	
AR-3DP2F100-COL	Pack of 100 FLEXY filament for 3Doodler all the same colour (packed in a tube). Available in 15 colours - see website for details.	
Glow in the Dark Material		
AR-3DP2P25-GL1	Pk of 25 PLA 3mm filament - Glow in the dark	
AR-3DP2P100-GL1	Tube of 100 PLA 3mm 3Doodler filament - Glow in the dark	
AR-3DP2A25-GL1	Pk of 25 ABS 3mm filament for 3Doodler - Glow in the dark	
AR-3DP2A100-GL1	Tube of 100 ABS 3mm 3Doodler filament - Glow in the dark	
Accessories		
AR-3DP2-STAND2	3Doodler 2.0 DoodleStands	
AR-3DP2-NOZZ1	3Doodler 2.0 Nozzle Set	
AR-3DP2-PED1	3Doodle Foot Pedal	
AR-3DP2-JET1	3Doodler 2.0 JetPack	
AR-3DP2-PAD1	DoodlePad	
AR-3DP2-BOOK1	3Doodler Book	

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. Includes 12 3Doodler Start Pens, 1200 filament strands, 12 Start DoodlePads, 24 DoodleBlocks, 2 Activity Guides, 2 Project Books, 1 3Doodler General EDU booklet, 1 User manual, 1 USB stick, 24 stickers, 12 Micro USB Cable		
AR-3DP3-PK2	3Doodler Start Half Education Bundle. Includes 6 3Doodler Start Pens, 600 filament strands, 6 Start DoodlePads, 12 DoodleBlocks, 1 Activity Guide, 1 Project Book, 1 3Doodler General EDU booklet, 1 User manual, 1 USB stick, 12 stickers, 6 Micro USB Cable		
Single Pen Packs			
AR-3DPEN3-PK1	3Doodler Start, 3D Printing Pen - Regular Box Set		
AR-3DPEN3-PK2	3Doodler Start, 3D Printing Pen - Mega Box Set		
Eco-Plastic Material for 3Doodler Start			
AR-3DP3P24-COL	Pack of 24 Eco-Plastic 150mm Strands all the same colour. Available in 9 colours, see website for details.		
Accessories			
AR-3DP3-SET1	Doodle Block Kit Jewellery Set		
AR-3DP3-SET2	Doodle Block Kit Vehicle Set		
AR-3DP3-SET3	Doodle Block Kit Rocket/Robot Set		
AR-3DP3-SET4	Doodle Block Kit Emoji/Symbol Set		

Milling / Routing / Engraving

Machine Comparison

Machine	Page	Price	Axis Travel	Max. Feed Rate	Spindle Speed	Resolution	Motor
Modela							
SRM-20E	65	£	203 x 152 x 60mm	30mm/s	100-7000rpm	0.01mm	50W
RotoCAMM							
MDX-40AE	66	£	305 x 305 x 105mm	50mm/s	4500 - 15000rpm	0.01mm	100W
EGX							
EGX-350E	68	£	305 x 230 x 40mm	60mm/s	5000 - 20000rpm	0.01mm	50W
Modela							
MDX-50E	69	£	400 x 305 x 135mm	60mm/s	4500 - 15000rpm	0.01mm	95W
Modela Pro II							
MDX-540E	70	£	500 x 400 x 155mm	125mm/s	400 - 12000rpm	0.001mm	400W
RouterCAM							
690	72	£	925 x 600 x 175mm	200mm/s	12000 - 24000rpm	0.05mm	1500W
1290	72	£	1220 x 900 x 130mm	200mm/s	6000 - 24000rpm	0.002mm	2200W
1224	72	£	1220 x 2440 x 175mm	200mm/s	12000 - 24000rpm	0.05mm	2200W
CNC Miller							
KX15	74	£	260 x 110 x 180mm	8mm/s	100 - 7000rpm	0.015mm	500W
KX3S	74	£	295 x 150 x 275mm	8mm/s	100 - 3500rpm	0.010mm	1000W
190VMCxi	76	£	225 x 150 x 140mm	33mm/s	350 - 3500rpm	0.010mm	450W
300VMCxi	76	£	304 x 157 x 213mm	83mm/s	200 - 4000rpm	0.010mm	1260W

Machine	Page	Price	Plastic/Resin/ Timber	Metals	Connection	2D Design Output	SOLIDWORKS Output
Modela							
SRM-20E	65	£	Yes	Engraves Brass	USB	Direct Control	Modela Player 4 (supplied) or Visual Toolpath (extra)
RotoCAMM							
MDX-40AE	66	£	Yes	Engraves Brass	USB	Direct Control	Visual Toolpath*
EGX							
EGX-350E	68	£	Yes	Engraves Brass	USB	Direct Control	n/a
Modela							
MDX-50E	69	£	Yes	Engraves Brass	USB	Direct Control	TBC
Modela Pro II							
MDX-540E	70	£	Yes	Aluminium	USB	Direct Control	Visual Toolpath*
RouterCAM							
690	72	£	Yes	Aluminium Option	USB Stick	Direct Control	Visual Toolpath*
1290	72	£	Yes	Aluminium Option	USB Stick	Direct Control	Visual Toolpath*
1224	72	£	Yes	Aluminium Option	USB Stick	Direct Control	Visual Toolpath*
CNC Miller							
KX15	74	£	Yes	Steel	Ethernet	Direct Control	n/a
KX3S	74	£	Yes	Steel	Ethernet	Direct Control	n/a
190VMCxi	76	£	Yes	Steel	USB	Via Mill Design	3D GeoCAM*
300VMCxi	76	£	Yes	Steel	USB	Via Mill Design	3D GeoCAM*

*Modela Player / Visual Toolpath / GeoCAM are supplied with relevant machines



Low Cost 3D Capable Miller/Router/Engraver

What is a SRM-20E?

The SRM-20E is a fully featured 3-Axis CNC milling machine which provides an excellent resource for one-off 2D and 2.5D projects in plastics and common modelling materials. Output for this purpose is direct from 2D Design V2 using the simple, familiar output routine. The SRM-20E also comes into its own for 3D work. The 203 x 152 x 60mm machining envelope is very generous for a machine in this class and will allow for most individual student projects. Models can be machined to fine tolerances with an excellent surface finish. To maximise work flow in a busy workshop, schools could usefully create a 3D Rapid Prototyping centre using two or more SRM-20Es rather than a single, higher capacity but more expensive machine. Machines are supplied with a TechSoft Training Pack and Roland utility software to convert .stl format files for machining. SRM-20 is compatible with Visual Toolpath (see page 21). Although at additional cost, we recommend Visual Toolpath as the most student-friendly way to convert .stl files and configure 3D output.

Why Choose a SRM-20E?

Although an entry-level machine, the SRM-20E is designed and built to professional standards specifically to provide in-house SRM (Subtractive Rapid Manufacturing) capability in a professional design studio. In education, an SRM-20E is sufficiently robust to stand the rigours of the classroom but remains a compact, self-contained resource that could safely be moved if required. Output speed and work capacity is ideal for individual student projects and batch production of smaller items.

CAD/CAM Milling – for Primary Schools Too!

SRM-20E is a friendly, safe and simple machine to use which makes it ideal to introduce genuine CAD/CAM milling to primary pupils. We have developed our 2D Primary software to output directly to SRM-20E. Individual pupils or small groups can now machine their own badges, puzzles or moulds with unprecedented accuracy. They will be learning about modern production methods and gaining experience with a real computer control system.



Roland Miller/Routers are the only milling/routing machines to be DIRECTLY CONTROLLED from 2D Design V2



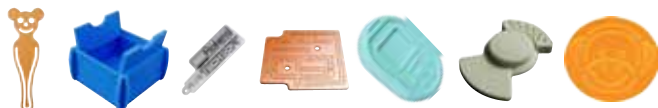
Specification

Axis Travel:	203 x 152 x 60mm
Max. Machinable:	203 x 152 x 60mm
Maximum Feedrate:	30mm/sec
Spindle Speed:	Up to 7000rpm
Resolution:	0.01mm
Interface:	USB
Weight:	19.6kg
Dimensions:	451(W)x427(D)x427(H)mm

What's Included

Free Education Training Pack 12002

The Training Pack gives you everything you need to get the machine unpacked and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up, and then a series of projects that illustrate the full potential of the machine for simple 2D profiling, PCB isolation engraving and full 3D modelling. Each pack contains a project CD, a booklet to guide you and a selection of tools, collets and materials. This includes TechSoft's own tooling and collet system to make tool set-up and tool changing a breeze. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - such as the ones shown below - and the confidence to develop your own ideas.



Includes Tools and Accessories 12005

Slot Drill (TA-SD4MP-2); Engraving Tool (TA-ECT4MP-40); Tool adaptors (2 x TA=ADAPT1-M4); Hex Tools (TA-HEXTOOL20, TX-HEXDRIVER7); Table Spacers (TA-SRM20-SPAC4); Sacrificial Bed (TC-SRM20-BED); Tape (TA-TAPE)

Warranty

UK Mainland & Ireland: 1 Year Return to Base
Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

Machine

MP-RL-SRM20E	Roland SRM-20E (includes TechSoft Training Pack)
---------------------	---

Recommended Extras

TF-WS3-C2	TechSoft Workstation 1400x800x850mm, c/w underbench cupboards containing in-built sockets, drawers, shelves and storage space for computer. See page 205.
------------------	---

Recommended Tooling

For details of these packs and our full range of tools see page 80

TP-MIX-SRM20E	Mixed Tool Pack (General set of tools) <i>Save £5</i>
TP-3D-40E	3D Tool Pack (Specialist 3D tools) <i>Save £5</i>
TP-PCB-SRM20E	PCB Tool Pack (Specialist PCB tools) <i>Save £5</i>

Recommended Materials

See details of this pack on page 91, and our full range of materials on pages 87-91

TPM2-MDX20	Mixed Pre-Cut Materials Pack for SRM-20E <i>Save £15</i>
-------------------	--

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14), Visual Toolpath (page 21) and SOLIDWORKS (page 18)



Versatile 3D Capable Miller/Router/Engraver The Ideal Machine for Schools

What is a RotoCamm MDX-40AE?

The MDX-40AE has been designed by Roland in close collaboration with TechSoft to provide a low-cost and robust machine specifically to meet the needs of UK education. The machine has an exceptionally large working envelope for its class - the 305mm square bed often allows several pupils' work to be machined in one operation, and 105mm of Z travel will accommodate large-scale 3D models. Rigid, heavy duty construction and a 100W spindle motor allow it to take quite heavy cuts in lighter materials, so fewer passes are needed. Combined with faster axis speeds, throughput now becomes realistic enough for class sets of project work to be machined during normal lesson time. It can even machine light alloys if allowed time for multiple fine passes.

Roland Miller/Routers are the only milling/router machines to be DIRECTLY CONTROLLED from 2D Design V2



work to be machined in one operation, and 105mm of Z travel will accommodate large-scale 3D models. Rigid, heavy duty construction and a 100W spindle motor allow it to take quite heavy cuts in lighter materials, so fewer passes are needed. Combined with faster axis speeds, throughput now becomes realistic enough for class sets of project work to be machined during normal lesson time. It can even machine light alloys if allowed time for multiple fine passes.

Versatility and Ease of Use

The MDX-40AE is clever too. Connections on the machine allow an optional 3D contact scanner to be fitted and there is even an optional 4th Axis unit to enable advanced machining routines for demanding senior students. To further complete the package we have now developed an optional jig to enable schools to machine streamlined car bodies for the F1 Challenge.

Tool set-up is easy using TechSoft's own top-loading collet system, but the machine also has a standard 6mm collet so a vast array of specialist tooling becomes available including TechSoft's own range of long reach cutters designed for deep 3D machining. For simple 2D profiles, machine set-up and output is direct from 2D Design V2. Should you need full manual control over the machine, then there is an intuitive on-screen Virtual Control Panel. This also lets you use Roland's ingenious Z0 sensor - a unique feature for such a low-cost machine. The sensor gives an easy and precise way to set Z0 when not using top-loading tools.

Why Choose a RotoCamm MDX-40AE?

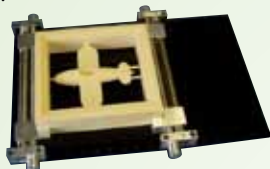
It is always tempting to want for more capacity, more speed and more power, but we believe that the MDX-40E will meet the CNC milling, routing and engraving needs of most departments and at a modest price. It is simple to use, tough and quick enough to deal with day to day work, but clever enough for advanced work if you ask it. Many departments buy two or more of these machines rather than one larger machine. A larger machine may well give you capacity in reserve, but it could be an intimidating prospect for younger pupils in particular.



Optional Extras

Self-Centering Vice

3D machining one side of an object is easy, but if the object needs to be machined all round how do you hold it? TechSoft have designed a low cost solution to this problem, a special self-centering vice (see page 91).



Scanning Head

To enhance the versatility of this superb machine even further, an optional contact scanning head is available. This quickly interchanges with the cutter head and means that just one machine can fulfil all the requirements of most schools for 3D work.



Rotary 4th Axis

The self-centering vice is great, but an even more sophisticated option is available for machining complex 3D objects, the rotary 4th axis. This device is like a mini lathe fitted under the cutter and capable of rotating an object through a full 360°.



The rotary 4th axis allows fully automatic machining of full 3D objects (max billet size 120mm diameter by 270mm long). Software support is via Roland SRP Player supplied free with the rotary 4th axis.

MDX-40AE



Pictured on optional TechSoft workstation for milling (computer not included)

Specification

Axis Travel:	305 x 305 x 105mm
Max Machinable:	305 x 305 x 75mm
Max Feedrate (X, Y):	50mm/sec
Max Feedrate (Z):	30mm/sec
Spindle Speed Range:	4500 to 15000rpm
Resolution:	0.01mm
Interface:	USB
Weight:	66kg
Dimensions:	669(W)x760(D)x554(H)mm

What's Included

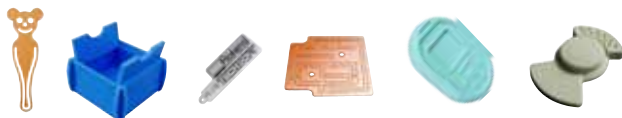
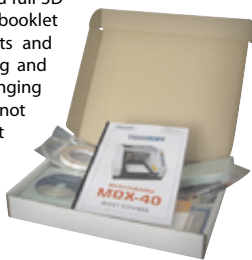
Z0 Sensor

This is a unique feature for such a low-cost machine. The sensor gives an easy and precise way to set Z0 when not using top-loading tools.



Free Education Training Pack 11988

The Training Pack gives you everything you need to get the machine unpacked and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up, and then a series of projects that illustrate the full potential of the machine for simple 2D profiling, PCB isolation engraving and full 3D modelling. Each pack contains a project CD, a booklet to guide you and a selection of tools, collets and materials. This includes TechSoft's own tooling and collet system to make tool set-up and tool changing a breeze. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - such as the ones shown below - and the confidence to develop your own ideas.



Includes Tools and Accessories 11989

Slot Drill (TA-SD4-2); Ball Nosed Cutter (TA-BN4-2); Engraving Tool (TA-ECT4-40); Tool adaptor (TA-ADAPT1-M4); Upper Collets (2 x TC-UC-1164); Sacrificial Bed (TC-TS30-BED); Tape (TA-TAPE)

Warranty

UK Mainland & Ireland: 1 Year On-Site
Elsewhere: 1 Year Return and Collect

* N.B. Extraction only required if cutting fine dust materials eg., foam, MDF, etc.

Prices £*

*See Pricing Information on page 2

MP-ROTO-MDX40AE	TechSoft/Roland RotoCamm MDX-40AE (inc. TechSoft Training Pk & Visual Toolpath Software)	
MP7-ROTO-MDX40AE	RotoCamm MDX-40AE Workstation Package. Includes Machine, TechSoft Training Pk, Visual Toolpath Software, Self-Centering Vice and TechSoft Workstation inc. auto-switched extractor with attachment. See page 205.	

Optional Extras

MP-ROTO-ROTARY40A	Optional Rotary 4th Axis (with Roland SRP Player Software)	
RL-ROTO-TS30SCAN	Optional Scanning Head	

Recommended Extras

TF-WS3-C1	TechSoft Workstation for Milling, 1400x800x850mm, inc. extractor. See page 205.	
RL-ROTO-VICE	Self-Centering Vice (RotoCamm MDX-40AE)	
RL-ROTO-VAC1	Extraction Attachment	
MM-EXTRACTION36	Numatic Standard Extractor, Single Motor (included in TechSoft Workstation TF-WS3-C1). See page 190.	
RL-ROTO-SWITCH	Mains Switching Unit (included in TechSoft Workstation TF-WS3-C1). See page 91.	

Recommended Tooling For details of these packs and other tooling see page 81

TP-MIX-40E	Mixed Tool Pack (General set of tools) <i>Save £5</i>	
TP-3D-40E	3D Tool Pack (Specialist 3D tools) <i>Save £7</i>	
TP-PCB-40E	PCB Tool Pack (Specialist PCB tools) <i>Save £5</i>	

Recommended Materials

See details of this pack on page 91, and our full range of materials on pages 87-91

TPM2-MDX40	Mixed Pre-Cut Materials Pack <i>Save £15</i>	
-------------------	--	--

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14) and SOLIDWORKS (page 18)

Engraving / Milling

Roland EGX-350E



Milling/Engraving Machine, Ideal for PCB Production

What is an EGX-350E?

The EGX-350E has been developed by Roland primarily for use as an engraving machine but, with 37mm of usable Z-axis to play with, it is still an excellent 3D capable machine albeit for shallower models. The generous bed size, fast axis travel and 50W spindle motor all make it a serious contender as a main CNC milling resource. Build quality is superb (as you would expect from Roland) and the machine is quiet enough to run in a workshop or studio environment. The entire machining envelope is enclosed by a robust, interlocked case so safety is assured and dust and debris will be largely contained. Operation for 2D work is simple and output is direct from 2D Design V2 with a familiar, simple dialogue to set up tool depths, feeds and speeds. Machine control is via a remote Handy Panel but, apart from switching the machine on to start with, most of the control will be via software through the output dialog box so the Handy Panel will see little use until you start to do 3D work. Top loading tools and the unique TechSoft collet system make tool setting very easy, accurate and reliable. If your main priority is for 2D and 2.5D modelling in light material and PCB production (in particular) then this may well be all the machine you will ever need – more power and bigger capacity is simply not needed for this sort of work.

Unique to this machine is an Active Surface Tracking system (effectively a floating-head arrangement) to maintain consistent cutting depth even on bowed or curved surfaces. If the machine's sacrificial bed is kept skimmed and flat, then this feature is unlikely to be a big advantage, but if you do need to engrave an uneven surface then Active Tracking could well get you out of a tight spot.

Because the machine was developed as an engraving tool it does not come with 3D software so you will need to buy Visual Toolpath. With this added, you will have a versatile and competent machine at surprisingly low cost.

DIRECT CONTROL
2D DESIGN
CONTROLLED from 2D Design V2
Roland Engravers/Millers are the only engraving/milling machines to be DIRECTLY CONTROLLED from 2D Design V2

Specification	
Axis Travel:	305 x 230 x 40mm
Max. Machinable:	305 x 230 x 37mm
Max Feed Rate (X, Y):	60mm/sec
Max Feed Rate (Z):	30mm/sec
Spindle Speed Range:	5000 to 20000rpm
Resolution:	0.01mm
Interface:	USB
Weight:	34kg
Dimensions:	616(W) x 591(D) x 393(H)mm

What's Included

Free Education Training Pack 11972
 The Training Pack gives you everything you need to get the machine out of the box and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up, and then a series of projects that illustrate the full potential of the machine for simple 2D profiling, PCB isolation engraving and 3D profiling. Each pack contains a project CD, a booklet to guide you and a selection of tools, collets and materials. This includes TechSoft's own tooling and collet system to make tool set-up and tool changing a breeze. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - some of which are shown below - and the confidence to develop your own ideas.

Includes Tools and Accessories 11976
 Slot Drill (TA-SD4-2); Ball Nosed Cutter (TA-BN4-2); Engraving Tool (TA-ECT4-40); VCarving Tool (TA-VCHS4E-90); Lower Collet (TA-LC-TS30); Extraction Attachment (TA-EGX-EXTRING, MMP-EXT-ADAPPTPT); Upper Collets (2 x TC-UC-1164); Hex Tool (TA-HEXT00L20); Sacrificial Bed (TC-CAMM2-BED); Lower Bed (TC-EGXACR-BED, TC-EGXMDf-BED); USB Cable (CB031); Tape (TA-TAPE)

Warranty
 UK Mainland & Ireland: 1 Year Return to Base
 Elsewhere: 1 Year Return and Collect

Prices £*

**See Pricing Information on page 2*

MP-ENG-EGX350E	Roland EGX-350E (inc. TechSoft Training Pack)	
MP7-ENG-EGX350E	EGX-350E Workstation Package. Includes Machine, TechSoft Training Pack, TechSoft Workstation inc. auto-switched extractor, underbench storage, in-built sockets & Gratnell Trays. See page 205.	
Recommended Extras		
TF-WS3-C1	TechSoft Workstation for Milling, 1400x800x850mm, inc. extractor. See page 205.	
MM-EXTRACTION36	Numatic Standard Extractor, Single Motor (included in TechSoft Workstation TF-WS3-C1). See page 190.	
RL-ROTO-SWITCH	Mains Switching Unit (included in TechSoft Workstation TF-WS3-C1). See page 91.	
Recommended Tooling For details of these packs and other tooling see page 86		
TP-MIX-350E	Mixed Tool Pack (General set of tools) <i>Save £5</i>	
TP-PCB-350E	PCB Tool Pack (Specialist PCB tools) <i>Save £5</i>	
Recommended Materials See details of this pack on page 91, and our full range of materials on pages 87-91		
TPM2-EGX350	Mixed Pre-Cut Materials Pack <i>Save £10</i>	
Recommended Software 2D Design V2 (page 12), 2D PCB (page 14), Visual Toolpath (page 21) and SOLIDWORKS (page 18)		
* N.B. Extraction only required if cutting fine dust materials e.g., foam, MDF, etc.		



Miller/Router with Automatic Tool Changer

What is an MDX-50E?

The MDX-50 has been built with features to meet the demands and tight-deadlines of professional design studios, but like all Roland equipment this model is simple and intuitive to use and will be equally at home in the school or university workshop. For a compact bench-top machine the working area is simply massive – larger machines fall into the category of production prototyping or large-format routing. With its brushless DC spindle motor and advanced drive mechanics, the MDX-50 mills incredibly smooth and accurate prototypes in a massive range of materials, at eye-wateringly high speeds. The built in control panel allows setup operations and on-the-fly adjustments to be made at the machine, while the computer based virtual control panel has sophisticated features such as tool-life management and machine code editing. An optional dust extraction kit keeps the work area tidy, while any heavy waste falls into a built-in debris collection drawer. This versatile machine is ideal for modelling complex 3D shapes, cutting acrylic profiles, or engraving PCBs with astoundingly high levels of precision.

Intuitive Software

Once again, TechSoft have collaborated with Roland to ensure seamless integration with 2D Design V2 to make the most of this advanced machine in a familiar software environment. For 3D work, SRP Player software from Roland is included in the package. This wizard based software simplifies the process of setting up complex tool paths, guiding the user by straightforward step-by-step setup routines. Built in animated virtual machining allowing students to preview the finish and estimate machining duration before the machine is put into action.

Why Choose the MDX-50?

You can't buy time, but the automated start-to-finish machining capability will certainly save you some. If you need extra capacity and a versatile compact desktop machine, this is the model for you.



Roland Miller/Routers are the only milling/routing machines to be DIRECTLY CONTROLLED from 2D Design V2



Specification

Axis Travel:	400 x 305 x 135mm
Max. Machinable:	400 x 305 x 105mm
Maximum Feedrate (X,Y):	60mm/sec
Maximum Feedrate (Z):	50mm/sec
Spindle Speed Range:	4500-15000rpm
Resolution:	0.01mm
Interface:	USB
Weight:	122kg
Dimensions:	760(W)x900(D)x732(H)mm

Automatic Tool Changer

The built in 5 position Automatic Tool Changer really does make life simple. Tool holders which are available for shank diameters up to 6mm are loaded into the stocker, and the machine then takes over and calibrates each one automatically. The Z0 position is set with a sensor whenever a new material is loaded, and the machine does the rest. Tools are selected by simply specifying their number in 2D Design or SRP Player software.



Optional Extras

Rotary Axis Unit

For automated full-3D machining operations, the optional Rotary Axis Unit means that work can be left unattended from start to finish.



Prices £*

*See Pricing Information on page 2

MP-RL-MDX50E	Roland MDX-50E (including, 6 x 6mm tool holders, 1 x 4mm tool holder & 1 x 3mm tool holder)	
Optional Extras		
RL-MDX50ROT	Rotary Unit for Roland MDX-50E	
Recommended Extras		
RL-ROTO-VICE	Self-Centering Vice	
RL-ROTO-VAC3	Extraction Attachment for MDX-50E	
MM-EXTRACTION36	Numatic Standard Extractor, Single Motor	
Recommended Tooling For details of these packs and other tooling see page 82		
TP-MIX-50E	Mixed Tool Pack (General set of tools)	
TP-3D-50E	3D Tool Pack (Specialist 3D tools)	
TP-PCB-50E	PCB Tool Pack (Specialist PCB tools)	
Recommended Materials		
See details of this pack on page 91, and our full range of materials on pages 87-91		
TPM2-MDX50	Mixed Pre-Cut Materials Pack Save £15	

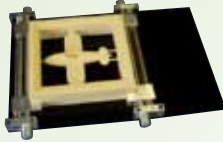
Recommended Software

2D Design V2 (page 12), 2D PCB (page 14) and SOLIDWORKS (page 18)

Optional Extras

Self-Centering Vice

3D machining one side of an object is easy, but if the object needs to be machined all round how do you hold it? TechSoft have designed a low cost solution to this problem, a special self-centering vice (see page 91).



Machine Vice

A simple to use quick release machine vice, with 100mm jaw width. Very useful for machining thick materials in billet form, such as machining plastic or aluminium, where double sided tape would not be sufficient. Two Tee-slot bars are required to fix the vice to the bed of the MDX-540.



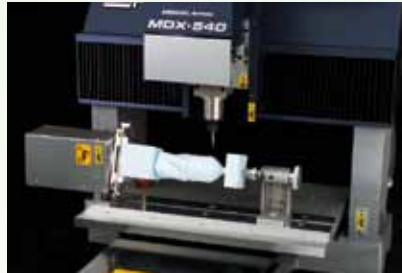
Tee-Slot Bars

Flat aluminium bars with a tee-slotted profile, allowing for vices, fixtures, or oddly shaped workpieces to be clamped to the bed directly using the 10mm nuts and bolts.



Rotary 4th Axis

The self-centering vice is great, but an even more sophisticated option is available for machining complex 3D objects, the rotary 4th axis. This device is like a mini lathe fitted under the cutter and capable of rotating an object through a full 360°. It allows fully automatic machining of full 3D objects (metal work pieces are not supported). Software support is via SRP Player supplied free with the machine.



Specification

Max. Billet Size: 180mm diameter by 371mm
 Max. Cutting Area: 180mm diameter by 285mm
 Max. Revolution: 20rpm
 Weight: 6.5kg

MDX-540AE



shown on optional stand

Specification

Axis Travel: 500 x 400 x 155mm
 Max. Machinable: 500 x 400 x 125mm
 Maximum Feedrate: 125mm/sec (7500mm/min)
 Max. Acceleration: 0.2G
 Motors (X, Y, Z): AC Servo
 Spindle Motor: 400W
 Spindle Speed Range: 400-12,000rpm
 Resolution: 0.001mm
 Interface: USB
 Weight (with case): 170kg
 Dimensions: 1060(W)x1100(D)x978(H)mm

What's Included

Z0 Sensor

The sensor gives an easy and precise way to set Z0.



Free Education Training Pack 11993

The Training Pack gives you everything you need to get the machine unpacked, assembled and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up and then a series of projects that illustrate the full potential of the machine for simple 2D profiling, PCB isolation engraving and full 3D modelling. Each pack contains a project CD, a booklet to guide you and a comprehensive selection of tools, collets and materials. This includes TechSoft's own tooling and collet system to make tool set-up and tool changing a breeze. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - such as the ones shown below - and the confidence to develop your own ideas.



Includes Tools and Accessories 11998

Slot Drill (TA-SD4MP-2); Ball Nosed Cutter (TA-BN4MP-2); Engraving Tool (TA-ECT4MP-40); Tool adaptor (TA-ADAPT1-M4); 6-7mm Collet (TA-COLLET-D67); Locating Rings (2 x TC-M4-LOCRING); Table Spacers (TA-MDX540-SPACER); Hex Tool (TA-HEXT00L20); USB Cable (CB031); Sacrificial Bed (TC-MDX540-BED); Tape (TA-TAPE)

Warranty

UK Mainland & Ireland: 1 Year On-Site
 Elsewhere: 1 Year Return and Collect

* N.B. Extraction only required if cutting fine dust materials eg., foam, MDF, etc.

Prices £*

*See Pricing Information on page 2

MP-MP-MDX540E	Roland Modela Pro II, MDX-540E (inc. TechSoft Training Pk & Visual Toolpath Software)	
MP6-MP-MDX540E	Modela Pro II, MDX-540E Standalone Package. Includes Machine, TechSoft Training Pk, Visual Toolpath Software, Stand, Self-Centering Vice, Machine Vice, Tee-Slot Bars and Extractor with attachment.	

Optional Extras

RL-MP-540STAND	Optional Stand for MDX-540E	
RL-MP-MDX540ROT	Optional Rotary 4th Axis for MDX-540E	

Recommended Extras

RL-ROTO-VICE	Self-Centering Vice (MDX-540AE)	
TA-MDX-TSLOTS	Tee-Slot Bars (Pack of 2)	
TA-MDX-VICE	Machine Vice (Quick Release, 100mm jaw)	
RL-MP-540VAC	Extraction Attachment for MDX-540E	
MM-EXTRACTION36	Numatic Standard Extractor, Single Motor. See page 190.	

Recommended Tooling For details of these packs and other tooling see page 83

TP-MIX-540E	Mixed Tool Pack (General set of tools) Save £5	
TP-3D-540E	3D Tool Pack (Specialist 3D tools) Save £7	
TP-PCB-540E	PCB Tool Pack (Specialist PCB tools) Save £5	

Recommended Materials

See details of this pack on page 91 and our full range of materials on pages 87-91

TPM2-MDX540	Mixed Pre-Cut Materials Pack Save £27	
--------------------	---------------------------------------	--

Recommended Software

2D Design V2 (page 12), 2D PCB (page 14) and SOLIDWORKS (page 18)

Milling / Routing / Engraving

TECHSOFT RouterCAM



RouterCAMs are the only large format routers to be DIRECTLY CONTROLLED through 2D Design V2

Powerful, High Speed, Large Format, 3D Capable Routers

Affordable Full-Size Routing

Full-size furniture projects have a long tradition in Design and Technology, but it can be difficult for students to include CAD/CAM when making them. Available CNC machinery is often too complex to operate, too expensive to buy, or simply not up to the scale required. To meet this need TechSoft are pleased to offer three British-built industrial quality machines that will accept even the largest of student projects, yet remain straightforward to operate and are fully compliant with safety requirements for education. The machines are built for continuous commercial production, so are more than tough enough to stand the rigours of educational use. A quality/capacity/price comparison reveals that these machines also represent exceptional value for money.

Easy Set-up and Control

TechSoft 2D Design V2 is the ideal tool to produce drawings for the RouterCAM and output is largely through the familiar TechSoft output dialog box where feeds, speeds and cutting depths are assigned to colour-coded toolpaths. 3D output is achieved in the same way but from files processed in TechSoft Visual Toolpath. In both cases data is transferred to the machine's own hand controller via USB. Datums can be set manually or (in the case of Z0) by using the sensor unit provided. The RouterCAM spindle is powered by an inverter-driven 3hp motor and axis speeds go up to an astonishing 200mm/sec (12m/min). This means you will always have performance in reserve to get the best results for any given combination of material and cutter diameter. Although designed primarily for machining timber-based panel material, a RouterCAM will also handle suitable plastics, light alloy and even slate, marble, etc.

Work Holding and Extraction

The machines feature an integral vacuum bed for work-holding via a replaceable diffuser sheet. Machines are supplied with the necessary 3hp high-power vacuum pump. A 'brush-foot' extraction attachment is provided and this effectively collects and contains airborne waste. One of our free-standing workshop extractors will provide sufficient power to remove waste or, alternatively, customers may wish to connect to an existing 'ducted' workshop system.



Why Choose a RouterCAM?

A RouterCAM is clearly a high power machine for large scale work, but it is still a versatile tool for general workshop duties. A class-set of lower school work can be quickly machined; small individual projects in 2D or 3D can be produced accurately and in detail. Needless to say, a RouterCAM is fully compatible with TechSoft 2D Design V2 for 2D/2.5D work, and Visual Toolpath for 3D work.

What's Included

Accessories

- Fully Interlocked Safety Case (690, 1290, 1212); Perimeter Enclosure (1224)
- Vacuum Table compressor
- Extraction attachment
- Machine tools and a selection of cutters/collets

Commissioning & Training

The cost of the RouterCAM also includes commissioning and training on the same day.

Warranty

UK Mainland & Ireland: 1 Year On-Site
Elsewhere: 1 Year Return and Collect

RouterCAM 690



With most of the benefits of the larger machines, this compact new addition to the range is the perfect choice where space is at a premium, or high power routing capability is needed on a tight budget.

Specification

Axis Travel:	925 x 600 x 175mm
Max. Machinable:	925 x 600 x 155mm
Max. Feedrate:	100mm/sec (6m/min)
Spindle Motor:	1.5kW (2hp)
Spindle Speed:	12,000 – 24,000rpm
Max. Collet Size:	16mm
Resolution:	0.05mm
Interface:	Hand controller. Data transfer via USB data device or direct cable connection.
Work Holding:	Vacuum bed & phenolic perimeter grid system.
Weight:	250kg
Dimensions:	1160(W) x 1460(D) x 1670(H)mm
Power Requirements:	240V 25A

RouterCAM 1290

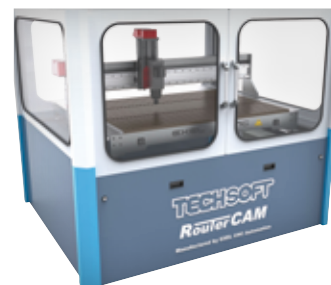


The first choice for schools and colleges wanting a fast, high-power routing facility for maximum productivity with large scale projects.

Specification

Axis Travel:	1220 x 900 x 130mm
Max. Machinable:	1220 x 900 x 110mm
Max. Feedrate:	200mm/sec (12m/min)
Spindle Motor:	2.2kW (3hp)
Spindle Speed:	12,000 – 24,000rpm
Max. Collet Size:	16mm
Resolution:	0.05mm
Interface:	Hand controller. Data transfer via USB data device or direct cable connection.
Work Holding:	Vacuum bed & phenolic perimeter grid system.
Weight:	520kg
Dimensions:	1900(W) x 1600(D) x 1700(H)mm
Power Requirements:	415V 32A

RouterCAM 1212



A larger version of the 1290 with a full 1220 x 1220 x 130mm axis travel.

Specification

Axis Travel:	1220 x 1220 x 130mm
Max. Machinable:	1220 x 1220 x 110mm
Max. Feedrate:	200mm/sec (12m/min)
Spindle Motor:	2.2kW (3hp)
Spindle Speed:	12,000 – 24,000rpm
Max. Collet Size:	16mm
Resolution:	0.05mm
Interface:	Hand controller. Data transfer via USB data device or direct cable connection.
Work Holding:	Vacuum bed & phenolic perimeter grid system.
Weight:	TBC
Dimensions:	TBC
Power Requirements:	415V 32A

RouterCAM 1224



Similar to the RouterCAM 1290, but with the capacity to machine full 1220 x 2440mm sheets. The machine is supplied with a full perimeter enclosure with a light beam guarding system across the loading side

Specification

Axis Travel:	1220 x 2440 x 175mm
Max. Machinable:	1220 x 2440 x 155mm
Max. Feedrate:	200mm/sec (12m/min)
Spindle Motor:	2.2kW (3hp)
Spindle Speed:	12,000 – 24,000rpm
Max. Collet Size:	16mm
Resolution:	0.05mm
Interface:	Hand controller. Data transfer via USB data device or direct cable connection.
Work Holding:	Vacuum bed & phenolic perimeter grid system.
Weight:	1300kg
Dimensions:	1800(W) x 2900(D) x 1600(H)mm
Power Requirements:	415V 32A

Prices £*

*See Pricing Information on page 2

MP-RC-690	RouterCAM 690 Package Includes Machine, Visual Toolpath software, fully interlocked safety case, vacuum bed with vacuum pump, extraction attachment, commissioning and training
MP-RC-1290	RouterCAM 1290 Package Includes Machine, Visual Toolpath software, fully interlocked safety case, vacuum bed with vacuum pump, extraction attachment, commissioning and training
MP-RC-1212	RouterCAM 1212 Package Includes Machine, Visual Toolpath software, fully interlocked safety case, vacuum bed with vacuum pump, extraction attachment, commissioning and training
MP-RC-1224	RouterCAM 1224 Package Includes Machine, Visual Toolpath software, fully interlocked perimeter enclosure, vacuum bed with vacuum pump, extraction attachment, commissioning and training

Recommended Extraction*

MM-EXTRACTION23	For 690/1290/1212: TechSoft/Numatic Workshop Extractor. See page 190.
MM-EXTRACTION80	For 1224: ESTA Dustomat 10 Extractor (1 phase). See page 189.

Recommended Tooling

For details of these packs and our full range of tools see pages 85-86

TP-COLL-RC2	Collet Pack (Additional Router Collets) Save £3
TP2-ROUT-RC	Router Tool Pack (Router tools) Save £5
TP-PLAS-RC	Plastics Tool Pack (Plastics tools) Save £5
TP-3D-RC	3D Tool Pack (3D tools) Save £5

Recommended Software

2D Design V2 (page 12); SOLIDWORKS (page 18)

* N.B. Extraction only required if cutting fine dust materials e.g., foam, MDF, etc.

CNC Milling

Sieg CNC Mill

Affordable CNC Metal-Milling Capability

Ideal for Engineering Training

These two machines offer the capacity to machine free-cutting steel and non-ferrous alloys with great accuracy from files generated in TechSoft 2D Design V2. These are entry level machines but both feature sufficient spindle and axis power for impressive performance. The machines are supplied with a coolant system, tooling and an Training Pack to enable you to get started straight away.

Easy Set-up and Control

Our Sieg CNC Milling packages are supplied with a software extension for 2D Design V2 that allows designs to be created and fully set-up for output using the familiar TechSoft dialog boxes. The output file created contains all the geometry, feed and speed information required so is ready to output directly via the machine's own Sieg CNC Milling control software. As a minimum, this software is used to set machine datums and to 'Dry Run' (or simulate) the output. Engineering students can take advantage of the many additional features such as full G&M code part program listing, creation and editing facilities. A robust, interlocked case ensures safety at all times.



The Sieg CNC Miller is **DIRECTLY CONTROLLED** by 2D Design V2 with CNC Mill Extension



Specifications

Machine:	KX15	KX35
Axis Travel:	260 x 110 x 180mm	295 x 150 x 275mm
Table Size:	400 x 145mm	470 x 160mm
Spindle Speed:	100-7000rpm (variable)	100-3500rpm (variable)
Motor:	0.5kW (0.7hp)	1kW (1.4hp)
Interface:	Ethernet (direct connection)	Ethernet (direct connection)
Weight:	178kg	510kg
Dimensions (mm):	1040(W) x 860(D) x 940(H)	1280(W) x 895(D) x 1845(H)
Power Requirements:	240V 0.7kW, 13A Socket	240V 1kW, 13A Socket
Other Requirements:	Computer with Ethernet	Computer with Ethernet

What's Included

Software

Sieg CNC Milling software
CNC Mill Extension for 2D Design V2.
N.B. 2D Design V2, see page 12, is not included but is required to run this Extension

Free Education Training Pack

Containing a Machine Guide/Tutorial booklet, a CD with project samples and four blocks of modelling board to carry out the tutorial exercises.

Accessories

Coolant System
Tooling Pack (Includes Swivel Base Machine Vice; Collet Set with 6 collets, set of 10 End Mills and 10 Slot Drills, Keyless Drill Chuck and Arbor)

Warranty

UK Mainland: 1 Year On-Site
Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MP-CM-51TS	Sieg CNC Mill KX15 Package Includes machine, software extension for 2D Design V2, coolant system and comprehensive tooling pack	
MP-CM-53TS	Sieg CNC Mill KX35 Package Includes machine with integral stand, software extension for 2D Design V2, coolant system and comprehensive tooling pack	

Recommended Extras

See details of our full range of tools and accessories on page 85

MT-CM-HC51	Hand Control Wheel	
-------------------	--------------------	--

Recommended Software

2D Design V2 (page 12)



The Sieg CNC Lathe is DIRECTLY CONTROLLED by 2D Design V2 with CNC Lathe Extension

CNC Turning for Steel and Non-Ferrous Metals

Robust and Precise for Engineering Training

The Sieg KC6S is a high quality machine built around precision-ground iron castings. In use, the machine is virtually vibration free. The machine has sufficient power for sensible machining times in an educational setting. A robust, interlocked, case means coolant and swarf are contained and moving parts are guarded.

Simple Part Design - Comprehensive Output Control

Our Sieg CNC Lathe package provides a software extension for 2D Design V2 that makes designing suitable components very straightforward. Profile lines in the drawing are colour coded according to the operation required. Up to six operations can be selected including roughing, parting-off, threading, etc., each operation being assigned one of the tools in the automatic 4-position toolpost. On 'CNC Output' a file is created that contains all the necessary G&M code data for geometry, tool type, feeds and speeds, etc. The file is then opened in the Sieg CNC Turning software and a full G-code listing is displayed. This can be edited if required or specialist users could even programme from scratch here. As a minimum, the Sieg software is used to manually control the machine and to set up tools, apply off-sets and to establish machine datums.

Clearly the Best Option

Designing parts and outputting to a CNC lathe can be tricky. TechSoft 2D Design V2 and the Sieg KC6S make the job crystal clear at all stages.



Specifications

Distance Between Centres:	450mm
Swing Over Bed:	250mm
Spindle Speed:	100-3,000rpm (variable)
Motor:	1kW (1.3hp)
Interface:	Ethernet - Direct Connection Advised
Weight:	440kg
Dimensions:	1460(W) x 760(D) x 1450(H)mm
Power Requirements:	240V 1.5kW, 13A Socket
Any Other Requirements:	Computer with an Ethernet Connection

What's Included

Software

Sieg CNC Turning software
CNC Lathe Extension for 2D Design V2.
N.B. 2D Design V2, see page 12, is not included but is required to run this Extension

Free Education Training Pack

Containing a Machine Guide/Tutorial booklet, a CD with project samples and four aluminium billets to carry out the tutorial exercises.

Accessories

Coolant System
Tooling Pack (Includes Live Centre; Keyless Drill Chuck and Arbor; Indexable tools 10mm - 60deg RH, 60deg LH, vee, external threading + blade-type parting tool)

Warranty

UK Mainland: 1 Year On-Site
Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MP-CL-52TS	Sieg CNC Lathe KC6S Package Includes machine with integral stand, software extension for 2D Design V2, coolant system and comprehensive tooling pack	
Recommended Extras See details of our full range of tools and accessories on page 85		
MT-CM-HC51	Hand Control Wheel	
Recommended Software 2D Design V2 (page 12)		



**190VMCxi
CNC Milling
Machine**

A versatile bench top machining centre, housed in a single enclosed cabinet, it is ideal for schools and training college and can easily be moved between rooms. With full 2D and 3D Capacity, it is capable of machining mild steel, alloys and synthetic materials to close tolerances. Includes pre-loaded anti-backlash ball screws on all axes, closed loop spindle control, and available with automated accessories and robot interface port for FMS/CIM system integration. Includes on-site training for UK mainland customers.



Specifications

Machine:	190VMCxi
Axis Travel:	225 x 150 x 140mm
Table Size:	410 x 130mm
Max Feedrate:	33mm/sec (2000mm/min)
Spindle Speed:	350-3500rpm
Motor:	450W
Interface:	USB
Weight:	150kg
Dimensions (mm):	890(W) x 610(D) x 600(H) 1280(H) with guard open
Power Requirements:	240V 0.5kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect



**300VMCxi
CNC Milling
Machine**

Floor standing machining centre with all the features of the 190VMCxi but with a larger machining capacity, plus one shot integrated lubrication system and flood coolant fitted as standard. Also includes integrated lockable storage cupboards and removable laptop shelf. Includes on-site training for UK mainland customers.



Specifications

Machine:	300VMCxi
Axis Travel:	304 x 157 x 213mm
Table Size:	505 x 135mm
Max Feedrate:	83mm/sec (5000mm/min)
Spindle Speed:	200-4000rpm
Motor:	1260W
Interface:	USB
Weight:	500kg
Dimensions (mm):	1955(W) x 820(D) x 1550(H) 2040(H) with guard open
Power Requirements:	240V 1.3kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-CNCMILL2	Boxford 190VMCxi CNC Milling Machine Supplied with Boxford software, vice, set of 6 toolholders, comprehensive set of tooling and additional 3D tooling	
Recommended Extras		
MM-CNCMILL2G	Cabinet base for MM-CNCMILL2 with braked castors, shelf & locking doors	
MM-CNCMILL2H	Laptop shelf for cabinet base	
Optional Extras		
MM-CNCMILL2F	Air-mist coolant for MM-CNCMILL2 (compressed air required)	
MM-COMPRESSOR3A	Bambi BB24V Compressor (0.5hp, 50 litres/min, receiver 24 litres, oil lubricated)	
MM-CNCMILL2J	Automatic 6-position toolchanger (needs compressed air and automation machine controller upgrade)	
MM-CNCMILL2K	Automation machine controller upgrade for MM-CNCMILL2	

Recommended Design Software

*2D Design V2 (page 12); SOLIDWORKS (page 18)

Prices £*

*See Pricing Information on page 2

MM-CNCMILL3	Boxford 300VMCxi CNC Milling Machine Supplied with Boxford software, vice, set of 6 toolholders, comprehensive set of tooling and additional 3D tooling	
Optional Extras		
MM-CNCMILL3G	Automatic 8-position toolchanger (needs compressed air and automation machine controller upgrade)	
MM-COMPRESSOR3A	Bambi BB24V Compressor (0.5hp, 50 litres/min, receiver 24 litres, oil lubricated)	
MM-CNCMILL3H	Automation machine controller upgrade for MM-CNCMILL3	
MM-CNCMILL3J	Set of 2 toolholders (in addition to the supplied 6) to fully populate 8-position ATC	

Recommended Design Software

*2D Design V2 (page 12); SOLIDWORKS (page 18)

* Each machine is supplied with a single copy of the Boxford CAD/CAM software which contains Mill Design (a cut-down version of 2D Design). 2D Design files will load directly into this. Alternatively, a Boxford Extension for 2D Design V2 can be purchased at a cost of +VAT to allow seamless integration via File > CNC Output.



**160TCLi
CNC Lathe
Machine**

A versatile lathe, housed in a single enclosed cabinet, it is ideal for schools and training colleges and can easily be moved between rooms. Includes 160mm swing over bed, precision dovetail slide construction, preloaded anti-backlash ball screws and spindle bored to pass 20mm diameter. Also includes 80mm diameter precision three jaw self-centering chuck. Includes on-site training for UK mainland customers.



Specifications

Machine:	160TCLi
Distance Between Centres:	140mm
Swing Over Bed:	160mm
Swing Over X Axes Slide:	70mm
X Axis Travel:	125mm
Z Axis Travel:	125mm
Max Feedrate:	25mm/sec (1500mm/min)
Spindle Speed:	200-3200rpm (variable)
Motor:	490W
Interface:	USB
Weight:	130kg
Dimensions (mm):	800(W) x 600(D) x 675(H) 1025(H) with guard open
Power Requirements:	240V 0.5kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect



**250PCi
CNC Lathe
Machine**

This floor standing lathe includes a 250mm swing over bed, spindle bored to pass 35mm and 125mm diameter precision three jaw self-centering chuck. Also has precision dovetail slide construction, preloaded anti-backlash ball screws, integrated lockable storage cupboards and removable laptop shelf. One shot lubrication system and flood coolant are fitted as standard. Includes on-site training for UK mainland customers.



Specifications

Machine:	250PCi
Distance Between Centres:	350mm
Swing Over Bed:	250mm
Swing Over X Axes Slide:	105mm
X Axis Travel:	200mm
Z Axis Travel:	265mm
Max Feedrate:	33mm/sec (2000mm/min)
Spindle Speed:	200-3200rpm (variable)
Motor:	2.2kW
Interface:	USB
Weight:	560kg
Dimensions (mm):	2000(W) x 870(D) x 1520(H)
Power Requirements:	240V 2.2kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-CNCLATHE1	Boxford 160TCLi CNC Lathe Supplied with Boxford software, 80mm 3-jaw self centering chuck, 8-station indexing turret & comprehensive set of tooling	
Recommended Extras		
MM-CNCLATHE1G	Cabinet base for MM-CNCLATHE1 with braked castors, shelf & locking doors	
MM-CNCLATHE1H	Laptop shelf for cabinet base	
Optional Extras		
MM-CNCLATHE1E	Tailstock for MM-CNCLATHE1	
MM-CNCLATHE1F	Air-mist coolant for MM-CNCLATHE1 (compressed air required)	
MM-COMPRESSOR3A	Bambi BB24V Compressor (0.5hp, 50 litres/min, receiver 24 litres, oil lubricated)	
Recommended Design Software 2D Design V2 (page 12)		

Prices £*

*See Pricing Information on page 2

MM-CNCLATHE3	Boxford 250PCi CNC Lathe Supplied with Boxford software, 125mm 3-jaw self-centering chuck, 8-station indexing turret and comprehensive set of tooling	
Optional Extras		
MM-CNCLATHE3E	Tailstock for MM-CNCLATHE3	
Recommended Design Software 2D Design V2 (page 12)		

CNC Milling and Turning

Boxford Combined CNC Lathes and Mills



**DUETi
Combined CNC
Lathe & Mill**

A versatile entry level combination lathe and vertical machining centre, housed in a single enclosed cabinet. This model is ideal for schools and training colleges and can easily be moved between rooms. Suitable for machining wax, plastics and other synthetic materials, it can be converted from lathe to mill in less than a minute and has full 2D and 3D capability. It includes slant bed configuration in lathe mode, 10 position automatic lathe tool changer, preloaded anti-backlash ball screws, 80mm diameter precision three jaw self-centering chuck and quick change vice for mill work holding. Includes on-site training for UK mainland customers.

Specifications

Machine:	DUETi
Lathe Mode	
Distance Between Centres:	330mm
Swing Over Bed:	225mm
X Axis Travel:	125mm
Z Axis Travel:	360mm
Mill Mode	
Axis Travel:	125 x 75 x 260mm
Table Size:	180 x 110mm
General	
Max Feedrate:	16mm/sec (1000mm/min)
Spindle Speed:	200-3500rpm (variable)
Motor:	380W
Interface:	USB
Weight:	80kg
Dimensions (mm):	890(W) x 480(D) x 590(H) 960(H) with guard open
Power Requirements:	240V 0.4kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect



**MT2i
Combined CNC
Lathe & Mill**

All the features of the DUETi, this floor standing combination lathe and vertical machining centre has stronger, precision components suitable for machining mild steel, alloys and synthetic material to close tolerances. It has a generous 400mm between centres, with optional tailstock steady, precision ground linear slides and preloaded anti-backlash ball screws on all axes and a 100mm diameter self-centering chuck. Integrated lockable storage cupboards and removable laptop shelf also fitted as standard. Includes on-site training for UK mainland customers.

Specifications

Machine:	MT2i
Lathe Mode	
Distance Between Centres:	400mm
Swing Over Bed:	210mm
X Axis Travel:	150mm
Z Axis Travel:	350mm
Mill Mode	
Axis Travel:	150 x 110 x 320mm
Table Size:	180 x 110mm
General	
Max Feedrate:	25mm/sec (1500mm/min)
Spindle Speed:	200-4000rpm (variable)
Motor:	2.2kW
Interface:	USB
Weight:	310kg
Dimensions (mm):	1500(W) x 720(D) x 1530(H)
Power Requirements:	240V 2.2kW, 13A Socket
Other Requirements:	Computer with USB
Warranty UK Mainland:	1 Year On-Site
Elsewhere:	1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-CNCCOMB1	Boxford DUETi Combined CNC Lathe and Mill <i>Supplied with Boxford software, 80mm and 100mm 3-jaw self centering chuck, vice, external automatic and internal quick-change toolchangers, turning, parting & basic milling cutters</i>	
Recommended Extras		
MM-CNCCOMB1F	Cabinet base for MM-CNCCOMB1 with braked castors, shelf and locking doors	
MM-CNCCOMB1G	Laptop shelf for cabinet base	
Optional Extras		
MM-CNCCOMB1B	Comprehensive Set of Lathe Tooling for MM-CNCCOMB1	
MM-CNCCOMB1C	Comprehensive Set of Mill Tooling and Holders for MM-CNCCOMB1	
MM-CNCCOMB1D	Additional 3D Tooling for MM-CNCCOMB1	
MM-CNCCOMB1E	Tailstock for MM-CNCCOMB1	

Recommended Design Software

*2D Design V2 (page 12); SOLIDWORKS (page 18)

Prices £*

*See Pricing Information on page 2

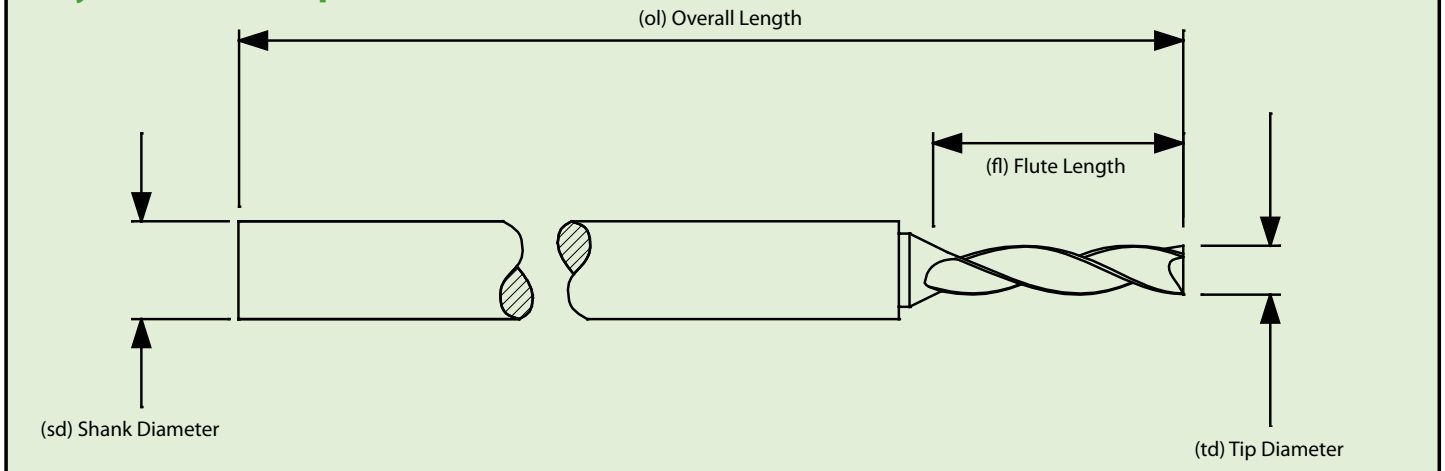
MM-CNCCOMB2	Boxford MT2i Combined CNC Lathe and Mill <i>Supplied with Boxford software, 100mm 3-jaw self-centering chuck, vice, basic milling cutters, 8 station indexing turret and comprehensive set of tooling to fully populate indexing turret. (Machine is cabinet mounted.)</i>	
Optional Extras		
MM-CNCCOMB2D	Comprehensive set of mill tooling and holders for MM-CNCCOMB2	
MM-CNCCOMB2E	Additional 3D Tooling for MM-CNCCOMB2	
MM-CNCCOMB2F	Tailstock for MM-CNCCOMB2	
MM-CNCCOMB2G	Flood Coolant for MM-CNCCOMB2	

Recommended Design Software

*2D Design V2 (page 12); SOLIDWORKS (page 18)

* Each machine is supplied with a single copy of the Boxford CAD/CAM software which contains Mill Design (a cut-down version of 2D Design). 2D Design files will load directly into this. Alternatively, a Boxford Extension for 2D Design V2 can be purchased at a cost of +VAT to allow seamless integration via File > CNC Output.

Key to tool descriptions



iM-01

Accessories, Sacrificial Beds and Consumables

TechSoft exclusively supplied the iModela with a 3mm diameter spindle and offer a range of suitable 3mm shank tooling. Once fitted and datumed, a locating ring can be fitted to a tool, to allow it to be easily removed and replaced without the need for re-datuming. As well as providing a level work surface (once skimmed flat), 5mm sacrificial beds can be used where necessary to 'build up' the bed, thus reducing the need for excessive tool overhang (stickout).

TA-M3-LOCRING	Pack of 3 Locating rings to fit 3mm tools	
TA-HEXTOL15	1.5mm Hex Tool for spindle grub screws	
RLP-IMOD-025	Replacement 3mm Spindle for iModela	
RLP-IMOD-001	Pack of 2 Spindle Motors (with pinion gear)	
TA-IMOD1-BED	White Styrene Sacrificial Bed, 86 x 55 x 5mm	

Tool Packs

TP-MIX-IMOD1	Mixed Tool Pack (General set of tools) (Save £5) (TA-ECTIL-40, TA-SDEA-2, TA-BNE-3)	
TP-PCB-IMOD1	PCB Tool Pack (Specialist PCB tools) (Save £5) (TA-ECTIL-40, TA-SDEA-2, TA-PD31-0.8, TA-PD31-1)	

Engraving Tools

General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg or 90 deg. The 40 deg tool is suitable for engraving most materials, and recommended as a standard tool for all users. The 90 deg tool is designed for making vee grooves in materials such as 2mm styrene.

TA-ECTIL-40	40°, 3mm (sd), 50mm (ol)	
TA-ECTIL-90	90°, 3mm (sd) x 50mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool (N.B. Tool must be returned to TechSoft)	

Slot Drills

General purpose milling/drilling slot drills in solid carbide. These tools (particularly in sizes 2mm and above) are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic.

TA-SDEA-1	1mm (td), 2mm (fl), 3mm (sd), 38mm (ol)	
TA-SDEA-1.5	1.5mm (td), 2mm (fl), 3mm (sd), 38mm (ol)	
TA-SDEA-2	2mm (td), 6mm (fl), 3mm (sd), 38mm (ol)	
TA-SDEA-3	3mm (td), 12mm (fl), 3mm (sd), 48mm (ol)	

Long Reach Modelling Slot Drills

A long reach carbide slot drill. Ideal for deep 3D machining

TA-SDE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
-----------------	--	--

Ball Nosed Cutters

A general purpose round ended cutter in carbide. Ideal for 3D modelling, particularly in modelling wax or foam.

TA-BNEA-2	2mm (td), 6mm (fl), 3mm (sd), 38mm (ol)	
------------------	---	--

Long Reach Ball Nosed Modelling Cutters

A long reach carbide ball nosed cutter. Ideal for very deep machining, particularly when profiling in 3D.

TA-BNE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
-----------------	--	--

Printed Circuit Board Drills

A range of specialist PCB drills in solid tungsten carbide.

TA-PD31-0.8	0.8mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD31-1	1mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD31-1.2	1.2mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD31-1.5	1.5mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	

Milling / Routing / Engraving - Tools

SRM-20E



SRM-20E

Collets & Sacrificial Beds

The SRM-20 is supplied with a 6mm Roland collet. However, for most general operations TechSoft recommend the use of 4.36mm (1/8 inch) extended shank tools. These are simply inserted into the Roland collet using a TechSoft tool adaptor. Tools can then be lowered onto the work surface, thus datuming the tool automatically. Adaptors can remain on the tool to allow them to be easily removed and replaced without the need for re-datuming. Two 4.36mm adaptors are supplied by TechSoft with the machine and adaptors are also available to fit 3.17mm (1/8 inch) tools, such as standard PCB drills. For deep 3D machining, the 6mm Roland collet allows the use of any of the Extended Long Reach Modelling tools listed below.


6mm replacement Roland collets are available, as well as various other sizes which may be useful for special applications.

RLP-SRM20-COLL3	3mm Roland Collet	
RLP-SRM20-COLL31	3.175mm Roland Collet	
RLP-SRM20-COLL4	4mm Roland Collet	
RLP-SRM20-COLL6	Replacement 6mm Roland collet	
TA-ADAPT-M3	Adaptors for 3.17mm tools (pk 3). <i>(For use with 6mm collet, also act as depth stops)</i>	
TA-ADAPT-M4	Replacement Adaptors for 4.36mm tools (pk 3). <i>(For use with 6mm collet, also acts as depth stop)</i>	
TA-HEXTOOL20	2mm Hex Tool for collet / Tool adaptor	
TC-SRM20-BED	White Styrene Sacrificial Bed for SRM-20	

Tool Packs

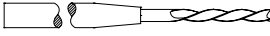
TP-MIX-SRM20E	Mixed Tool Pack (General set of tools) (Save £5) <i>(TA-ADAPT-M4, TA-ECT4MP-40, TA-SD4MP-2, TA-SD4MP-4, TA-BN4MP-2)</i>	
TP-3D-40E	3D Tool Pack (Specialist 3D tools) (Save £7) <i>(TA-SD6LR-2, TA-SD6LR-4, TA-BN6LR-2, TA-BN6LR-4)</i>	
TP-PCB-SRM20E	PCB Tool Pack (Specialist PCB tools) (Save £5) <i>(TA-ADAPT-M3, TA-ADAPT-M4, TA-ECT4MP-40, TA-SD4MP-2, TA-PD3M-0.8, TA-PD3M-1)</i>	

Ball Nosed Cutters

General purpose round ended cutters in carbide. They are ideal for 3D modelling, particularly in modelling wax or foam. 

TA-BN4MP-2	2mm (td), 6mm (fl), 4.36mm (sd), 65mm (ol)	
TA-BN4MP-3	3mm (td), 7mm (fl), 4.36mm (sd), 70mm (ol)	
TA-BN4MP-4	4mm (td), 7mm (fl), 4.36mm (sd), 70mm (ol)	


Extended Long Reach Ball Nosed Modelling Cutters

A range of long reach carbide ball nosed cutters mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D. 

TA-BN6LR-2	2mm (td), 6mm (fl), 6mm (sd), 75mm (ol)	
TA-BN6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-BN6LR-4	4mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	

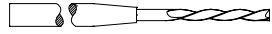
N.B. All tool lengths are nominal - see key page 79

Slot Drills

General purpose milling/drilling slot drills in solid carbide. These tools (particularly in sizes 2mm and above) are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic. 

TA-SD4MP-0.5	0.5mm (td), 3mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-0.8	0.8 (td), 4mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-1	1mm (td), 5mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-1.5	1.5mm (td), 5mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-2	2mm (td), 6mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-2.5	2.5mm (td), 8mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-3	3mm (td), 12mm (fl), 4.36mm (sd), 70mm (ol)	
TA-SD4MP-4	4mm (td), 15mm (fl), 4.36mm (sd), 85mm (ol)	


Extended Long Reach Modelling Slot Drills

A range of long reach carbide slot drills mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D. 

TA-SD6LR-2	2mm (td), 8mm (fl), 6mm (sd), 75mm (ol)	
TA-SD6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-SD6LR-4	4mm (td), 25mm (fl), 6mm (sd), 90mm (ol)	


Engraving Tools

40 deg

General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials, and recommended as a standard tool for all users. 


TA-ECT4MP-40	40°, 0.3mm (td), 4.36mm (sd), 65mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool <i>(N.B. TA-ECT4MP-40 tool must be returned to TechSoft)</i>	

90 deg

Solid carbide vee point slot drill with an included angle of 90 degrees. This tool is ideal for VCarving, PhotoVCarving and cutting 45 degree chamfers. 

TA-VC6-90	90°, 5mm (td), 12mm (fl), 6mm (sd), 50mm (ol)	
------------------	---	--

Printed Circuit Board Drills

A range of solid carbide PCB drills. These must be used in conjunction with the 3.17mm tool adaptor (TA-ADAPT-M3, see above). 

TA-PD3M-0.8	Pack of 5 Drills: 0.8mm (td), 10mm (fl), 3.17mm (sd), 38mm (ol)	
TA-PD3M-1	Pack of 5 Drills: 1mm (td), 10mm (fl), 3.17mm (sd), 38mm (ol)	
TA-PD3M-1.2	Pack of 5 Drills: 1.2mm (td), 10mm (fl), 3.17mm (sd), 38mm (ol)	
TA-PD3M-1.5	Pack of 5 Drills: 1.5mm (td), 10mm (fl), 3.17mm (sd), 38mm (ol)	



MDX-40AE



MDX-40E

N.B. All tool lengths are nominal - see key page 79

Accessories

RL-ROTO-TS30SCAN	Optional Scanning Head for RotoCAMM MDX-40AE/MDX-40E/TS-30E	
RL-ROTO-ROTARY40A	Optional Rotary 4th Axis for RotoCAMM MDX-40AE	
RL-ROTO-ROTARY	Optional Rotary 4th Axis for RotoCAMM MDX-40E	

Collets & Sacrificial Beds

The MDX-40AE is supplied with a standard Roland 6mm dia collet. Using just this collet limits the choice of possible tools, and also makes setting up more awkward. For most general operations TechSoft recommend the use of 4.36mm (11/64 inch) extended shank tools. These are simply lowered through the machine spindle to touch onto the work surface, thus datuming the tool automatically. These tools should also be fitted with an additional top collet (TA-UC-1164) to allow them to be easily removed and replaced without the need for re-datuming. To make use of this system a tool adaptor is required (one is supplied by Techsoft with the machine). The adaptor (TA-ADAPT-M4) can remain fitted to the machine inside the standard Roland collet.

Some special tools (such as the long reach ball nosed cutters) have a 6mm shank. These may be used directly in the standard Roland collet.

TA-ADAPT1-M4	Adaptor for 4.36mm tools (replacement)	
TA-UC-1164	Upper collets for 4.36mm tools (pk of 3)	
TA-HEXTOL20	2mm Hex Tool for adaptor adjustment	
RP112	6mm Roland Collet (replacement)	
TC-TS30-BED	White Styrene Sacrificial Bed for MDX-40E/MDX-40AE	

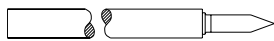
Tool Packs

TP-MIX-40E	Mixed Tool Pack (General set of tools) (Save £5) (TA-UC-1164, TA-ECT4-40, TA-SD4-2, TA-SD4-4, TA-BN4-2)	
TP-3D-40E	3D Tool Pack (Specialist 3D tools) (Save £7) (TA-SD6LR-2, TA-SD6LR-4, TA-BN6LR-2, TA-BN6LR-4)	
TP-PCB-40E	PCB Tool Pack (Specialist PCB tools) (Save £5) (TA-UC-1164, TA-ECT4-40, TA-SD4-2, TA-PD4-0.8, TA-PD4-1)	

Engraving Tools

40 deg

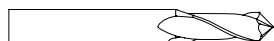
General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials, and recommended as a standard tool for all users.



TA-ECT4-40	40°, 4.36mm (sd), 165mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool <i>(N.B. TA-ECT4-40 tool must be returned to TechSoft)</i>	

90 deg

Solid carbide vee point slot drill with an included angle of 90 degrees. This tool is ideal for VCarving, PhotoVCarving and cutting 45 degree chamfers.



TA-VC6-90	90°, 5mm (td), 12mm (fl), 6mm (sd), 50mm (ol)	
------------------	---	--

Slot Drills

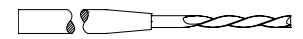
General purpose milling/drilling slot drills in solid carbide. These tools (particularly in sizes 2mm and above) are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic.



TA-SD4-0.5	0.5mm (td), 3mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-0.8	0.8mm (td), 4mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-1	1mm (td), 5mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-1.5	1.5mm (td), 5mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-2	2mm (td), 6mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-2.5	2.5mm (td), 8mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-3	3mm (td), 12mm (fl), 4.36mm (sd), 150mm (ol)	
TA-SD4-4	4mm (td), 15mm (fl), 4.36mm (sd), 160mm (ol)	

Extended Long Reach Modelling Slot Drills

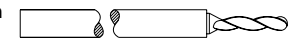
A range of long reach carbide slot drills mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D.



TA-SD6LR-2	2mm (td), 8mm (fl), 6mm (sd), 75mm (ol)	
TA-SD6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-SD6LR-4	4mm (td), 25mm (fl), 6mm (sd), 90mm (ol)	

Ball Nosed Cutters

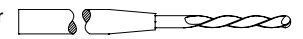
General purpose round ended cutters in carbide. They are ideal for 3D modelling, particularly in modelling wax or foam.



TA-BN4-2	2mm (td), 6mm (fl), 4.36mm (sd), 145mm (ol)	
TA-BN4-3	3mm (td), 7mm (fl), 4.36mm (sd), 145mm (ol)	
TA-BN4-4	4mm (td), 7mm (fl), 4.36mm (sd), 160mm (ol)	

Extended Long Reach Ball Nosed Modelling Cutters

A range of long reach carbide ball nosed cutters mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D.



TA-BN6LR-2	2mm (td), 6mm (fl), 6mm (sd), 75mm (ol)	
TA-BN6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-BN6LR-4	4mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	

Printed Circuit Board Drills

A range of specialist PCB drills in tungsten carbide.



PCB Drill:

TA-PD4-0.8	0.8mm (td), 10mm (fl), 4.36mm (sd), 145mm (ol)	
TA-PD4-1	1mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	
TA-PD4-1.2	1.2mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	
TA-PD4-1.5	1.5mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	

Milling / Routing / Engraving - Tools

Modela MDX-50E



MDX-50E

Tool Holders

The automatic tool changer supports six tool positions, one of which must be used for the detection pin. The machine is supplied with six 6mm tool holders, one 4mm tool holder and one 3mm tool holder. Each tool must be fitted with the appropriate tool holder (dependent on the tool's shank diameter), and then placed into one of the numbered tool positions. From then on, the Z0 position is found automatically as each tool is used.



RLP-MDX50-ZH6	6mm Tool Holder for MDX-50	
RLP-MDX50-ZH4	4mm Tool Holder for MDX-50	
RLP-MDX50-ZH3	3mm Tool Holder for MDX-50	

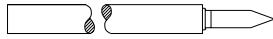
Tool Packs

TP-MIX-50E	Mixed Tool Pack (General set of tools) (Save £5) (RLP-MDX50-ZH4, TA-EC6-40S, TA-SDEA-2, TA-SDEA-4, TA-BNE-4)	
TP-3D-50E	3D Tool Pack (Specialist 3D tools) (Save £7) (RLP-MDX50-ZH3, RLP-MDX50-ZH4, TA-SDE-3 TA-SDE-4, TA-BNE-3, TA-BNE-4)	
TP-PCB-50E	PCB Tool Pack (Specialist PCB tools) (Save £5) (2xRLP-MDX50-ZH3, TA-EC6-40S, TA-SDEA-2, TA-PD3I-0.8, TA-PD3I-1)	

Engraving Tools

40 deg

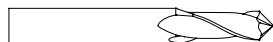
General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials, and recommended as a standard tool for all users.



TA-EC6-40S	Engraving Tool 40deg, 6mm (sd), 50mm (ol) (single ended)	
-------------------	--	--

90 deg

Solid carbide vee point slot drill with an included angle of 90 degrees. This tool is ideal for VCarving, PhotoVCarving and cutting 45 degree chamfers.



TA-VC6-90	VCarving Tool 90deg, 5mm (td), 12mm (fl), 6mm (sd), 50mm (ol)	
------------------	---	--

N.B. All tool lengths are nominal - see key page 79

Slot Drills

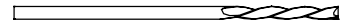
General purpose milling/drilling slot drills in solid carbide. These tools are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic.



TA-SDEA-2	High Hook Slot Drill: 2mm diameter tip, 6mm flute length, 3mm shank diameter, 38mm overall length	
TA-SDEA-3	High Hook Slot Drill: 3mm diameter tip, 12mm flute length, 3mm shank diameter, 48mm overall length	
TA-SDEA-4	High Hook Slot Drill: 4mm diameter tip, 12mm flute length, 4mm shank diameter, 50mm overall length	

Long Reach Modelling Slot Drills

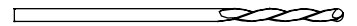
A range of long reach carbide slot drills. Ideal for deep 3D machining.



TA-SDE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
TA-SDE-4	4mm (td), 25mm (fl), 4mm (sd), 75mm (ol)	
TA-SDE-6	6mm (td), 25mm (fl), 6mm (sd), 65mm (ol)	

Long Reach Modelling Ball Nosed Cutters

A range of long reach carbide ball nosed cutters, ideal for deep 3D machining.



TA-BNE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
TA-BNE-4	4mm (td), 20mm (fl), 4mm (sd), 60mm (ol)	
TA-BNE-6	6mm (td), 25mm (fl), 6mm (sd), 75mm (ol)	

Printed Circuit Board Drills

A range of specialist PCB drills in solid tungsten carbide.



TA-PD3I-0.8	0.8mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD3I-1	1mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD3I-1.2	1.2mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	
TA-PD3I-1.5	1.5mm (td), 10mm (fl), 3mm (sd), 40mm (ol)	

(N.B. For MDX-500E/650 tools see website)

N.B. All tool lengths are nominal - see key page 79

Collets & Sacrificial Beds

This machine is supplied with a 6-7mm collet as standard. However, for most general operations TechSoft recommend the use of 4.36mm (11/64 inch) extended shank tools. These are simply inserted into the machine spindle using a TechSoft tool adaptor. Tools can then be lowered onto the work surface, thus datuming the tool automatically. A locating ring can remain on the tool to allow it to be easily removed and replaced without the need for re-datuming. A 4.36mm adaptor and two locating rings are supplied by TechSoft with the machine.



Alternatively the 6-7mm collet allows the use of standard 6mm shank engineering tools and 1/4 inch woodworking router cutters. Additional collets (TA-COLLET-D34 and TA-COLLET-D45) allow the use of any of the Long Reach or High Hook tools listed below.

TA-COLLET-D67	6-7mm collet (replacement)	
TA-COLLET-D56	5-6mm collet	
TA-COLLET-D45	4-5mm collet	
TA-COLLET-D34	3-4mm collet	
TA-COLLET-D23	2-3mm collet	
TA-ADAPT1-M4	Adaptor for 4.36mm tools (replacement)	
TA-M4-LOCRING	Locating Ring to fit 4.36mm tools (pk 3)	
TA-HEXTOOL20	2mm Hex Tool for ring/adaptor adjustment	
TC-MDX540-BED	White Styrene Sacrificial Bed for MDX-540E	

Tool Packs

TP-MIX-540E	Mixed Tool Pack (General set of tools) (Save £5) (TA-M4-LOCRING, TA-ECT4MP-40, TA-SD4MP-2, TA-SD4MP-4, TA-BN4MP-2)	
TP-3D-540E	3D Tool Pack (Specialist 3D tools) (Save £7) (TA-SD6LR-2, TA-SD6LR-4, TA-BN6LR-2, TA-BN6LR-4)	
TP-PCB-540E	PCB Tool Pack (Specialist PCB tools) (Save £5) (TA-M4-LOCRING, TA-ECT4MP-40, TA-SD4MP-2, TA-PD4MP-0.8, TA-PD4MP-1)	

Ball Nosed Cutters

General purpose round ended cutters in carbide. They are ideal for 3D modelling, particularly in modelling wax or foam.

TA-BN4MP-2	2mm (td), 6mm (fl), 4.36mm (sd), 65mm (ol)	
TA-BN4MP-3	3mm (td), 7mm (fl), 4.36mm (sd), 70mm (ol)	
TA-BN4MP-4	4mm (td), 7mm (fl), 4.36mm (sd), 70mm (ol)	

Long Reach Ball Nosed Modelling Cutters

A range of long reach carbide ball nosed cutters, ideal for deep 3D machining.

TA-BNE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)*	
TA-BNE-4	4mm (td), 20mm (fl), 4mm (sd), 60mm (ol)*	
TA-BNE-5	5mm (td), 20mm (fl), 5mm (sd), 60mm (ol)*	
TA-BNE-6	6mm (td), 25mm (fl), 6mm (sd), 75mm (ol)	

Extended Long Reach Ball Nosed Modelling Cutters

A range of long reach carbide ball nosed cutters mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D.

TA-BN6LR-2	2mm (td), 6mm (fl), 6mm (sd), 75mm (ol)	
TA-BN6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-BN6LR-4	4mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	

* These tools require collet TA-COLLET-D34, TA-COLLET-D45 or TA-COLLET-D56 as appropriate

Slot Drills

General purpose milling/drilling slot drills in solid carbide. These tools (particularly in sizes 2mm and above) are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic.

TA-SD4MP-0.5	0.5mm (td), 3mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-0.8	0.8mm (td), 4mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-1	1mm (td), 5mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-1.5	1.5mm (td), 5mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-2	2mm (td), 6mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-2.5	2.5mm (td), 8mm (fl), 4.36mm (sd), 60mm (ol)	
TA-SD4MP-3	3mm (td), 12mm (fl), 4.36mm (sd), 70mm (ol)	
TA-SD4MP-4	4mm (td), 15mm (fl), 4.36mm (sd), 85mm (ol)	

Long Reach Modelling Slot Drills

A range of long reach carbide slot drills. Ideal for deep 3D machining

TA-SDE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)*	
TA-SDE-4	4mm (td), 25mm (fl), 4mm (sd), 75mm (ol)*	
TA-SDE-5	5mm (td), 25mm (fl), 5mm (sd), 60mm (ol)*	
TA-SDE-6	6mm (td), 25mm (fl), 6mm (sd), 65mm (ol)	

Extended Long Reach Modelling Slot Drills

A range of long reach carbide slot drills mounted in an extended shank for ease of use. Ideal for very deep machining, particularly when profiling in 3D.

TA-SD6LR-2	2mm (td), 8mm (fl), 6mm (sd), 75mm (ol)	
TA-SD6LR-3	3mm (td), 20mm (fl), 6mm (sd), 90mm (ol)	
TA-SD6LR-4	4mm (td), 25mm (fl), 6mm (sd), 90mm (ol)	

High Hook Slot Drills

A range of carbide slot drills with tooth forms specially designed for rapid CNC machining in aluminium and plastics.

TA-SDEA-2	2mm (td), 6mm (fl), 3mm (sd), 38mm (ol)*	
TA-SDEA-3	3mm (td), 12mm (fl), 3mm (sd), 48mm (ol)*	
TA-SDEA-4	4mm (td), 12mm (fl), 4mm (sd), 50mm (ol)*	
TA-SDEA-5	5mm (td), 20mm (fl), 5mm (sd), 50mm (ol)*	
TA-SDEA-6	6mm (td), 20mm (fl), 6mm (sd), 60mm (ol)	

Engraving Tools

40 deg

General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials, and recommended as a standard tool for all users.

TA-ECT4MP-40	40°, 0.3mm (td), 4.36mm (sd), 65mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool (N.B. TA-ECT4MP-40 tool must be returned to TechSoft)	

90 deg

Solid carbide vee point slot drill with an included angle of 90 degrees. This tool is ideal for VCarving, PhotoVCarving and cutting 45 degree chamfers.

TA-VC6-90	90°, 5mm (td), 12mm (fl), 6mm (sd), 50mm (ol)	
------------------	---	--

Printed Circuit Board Drills

A range of specialist PCB drills in tungsten carbide.

TA-PD4MP-0.8	0.8mm (td), 10mm (fl), 4.36mm (sd), 70mm (ol)	
TA-PD4MP-1	1mm (td), 10mm (fl), 4.36mm (sd), 70mm (ol)	
TA-PD4MP-1.2	1.2mm (td), 10mm (fl), 4.36mm (sd), 70mm (ol)	
TA-PD4MP-1.5	1.5mm (td), 10mm (fl), 4.36mm (sd), 70mm (ol)	

Milling / Routing / Engraving - Tools

RouterCAM



690



1290



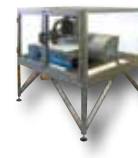
1212



1224



1000/1200/1500



700



1220

N.B. All tool lengths are nominal - see key page 79

Collets

For RouterCAM 690 / 1290 / 1212 / 1224 / 1000 / 1200 / 1500

The RouterCAM 690, 1290, 1212 and 1224 are supplied with a 5-6mm and a 6-7mm collet as standard. The 5-6mm collet allows the use of standard 6mm shank engineering tools, and ¼ inch (6.35mm) woodworking router cutters. The 7-8mm collet allows the use of 8mm router cutters.

Additional collets are available to allow the use of tools with shank sizes from 2mm - 13mm.

TP-COLL-RC2	Collet Pack <i>Additional Router Collets for 690/1290/1212/1224/1000/1200/1500 (Save £3)</i> (TA-RCOLL-D23, TA-RCOLL-D34, TA-RCOLL-D45, TA-RCOLL-D56)	
TA-RCOLL-D23	2-3mm collet	
TA-RCOLL-D34	3-4mm collet	
TA-RCOLL-D45	4-5mm collet	
TA-RCOLL-D56	5-6mm collet (replacement)	
TA-RCOLL-D67	6-7mm collet (replacement)	
TA-RCOLL-D78	7-8mm collet	
TA-RCOLL-D89	8-9mm collet	
TA-RCOLL-D910	9-10mm collet	
TA-RCOLL-D1011	10-11mm collet	
TA-RCOLL-D1112	11-12mm collet	
TA-RCOLL-D1213	12-13mm collet	
TA-SPANCER25	C Spanner, ER25 (replacement)	

For RouterCAM 700 / 1220

RouterCAM 700 / 1220 machines were supplied with a 6mm and ¼" collet as standard. These collets allow the use of standard 6mm shank engineering tools, and ¼ inch woodworking router cutters. Additional collets are available to allow the use of tools with shank sizes from 3mm - 8mm.

TP-COLL-RC1	Collet Pack <i>Additional Router Collets for 700/1220 (Save £3)</i> (TA-RCOLL-D3, TA-RCOLL-D4, TA-RCOLL-D8)	
TA-RCOLL-D3	3mm collet	
TA-RCOLL-D4	4mm collet	
TA-RCOLL-D6	6mm collet (replacement)	
TA-RCOLL-D8	8mm collet	
TA-RCOLL-D1/4	1/4" (6.35mm) collet (replacement) for RouterCAM 700/1220	
TA-SPANC2528	C Spanner, 25-28 (replacement) for RouterCAM 700/1220	

Accessories and Consumables

For RouterCAM 690 / 1290 / 1212 / 1224

TMP-RC-BED5	Sintered Matting Bed for RouterCAM 690	
TMP-RC-BED3	Sintered Matting Bed for RouterCAM 1290	
TMP-RC-BED6	Sintered Matting Bed for RouterCAM 1212	
TMP-RC-BED4	Sintered Matting Bed for RouterCAM 1224	
TMP-RC-SC6-5	5m Sponge Cord (6mm dia.) for Vac Grid	
TMP-RC-VP-6	Vacuum Blanking Plugs (Pk of 6)	

For RouterCAM 700 / 1220

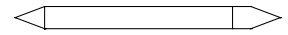
TMP-RC-BED	Texon Bed for RouterCAM 700/1220	
-------------------	----------------------------------	--

Tool Packs

TP2-ROUT-RC	Router Tool Pack (<i>Router tools</i>) (Save £5) (4 x TA-RCF6-6, 2 x TA-RCF8-8, TA-RCV8-30, TA-RCV8-60) <i>N.B. Requires collets for 6mm and 8mm tools</i>	
TP-PLAS-RC	Plastics Tool Pack (<i>Plastics tools</i>) (Save £5) (TA-EC6-40, TA-SDEA-2, TA-SDEA-4, TA-SDEA-6) <i>N.B. Requires collets for 3mm, 4mm & 6mm tools</i>	
TP-3D-RC	3D Tool Pack (<i>Specialist 3D tools</i>) (Save £5) (TA-SDE-3, TA-SDE-6, TA-BNE-3, TA-BNE-6) <i>N.B. Requires collets for 3mm & 6mm tools</i>	

Engraving Tool (40 deg)

General purpose carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials.



TA-EC6-40	40 deg, 6mm (sd), 75mm (ol) (<i>Double ended</i>)	
------------------	---	--

V-Shaped Cutters

A range of tungsten carbide v-shaped cutters with two straight flutes.



1/4" shank cutters

TA-RCV1/4-60	60° included angle (sharp point) (A)60° (D)26mm (L)25mm	
---------------------	--	--

8mm shank cutters

TA-RCV8-30	120° included angle (1mm point) (A)30° (D)21.5mm (L)12mm	
TA-RCV8-45	90° included angle (1mm point) (A)45° (D)18mm (L)14mm	
TA-RCV8-60	60° included angle (1mm point) (A)60° (D)15.75mm (L)16mm	

Router Cutters

Solid carbide single flute cutters with a high helix, high rake flute design ideal for machining man-made boards (MDF etc.), plastics, and even non-ferrous metals.

6mm shank cutter

TA-RCF6-6	6mm (td), 20mm (fl), 6mm (sd), 65mm (ol)	
------------------	--	--

8mm shank cutters

TA-RCF8-8	8mm (td), 22mm (fl), 8mm (sd), 65mm (ol)	
------------------	--	--

10mm shank cutters

TA-RCF10-10	10mm (td), 25mm (fl), 10mm (sd), 75mm (ol)	
--------------------	--	--

12mm shank cutters

TA-RCF12-12	12mm (td), 30mm (fl), 12mm (sd), 80mm (ol)	
--------------------	--	--



690



1290



1212



1224



Sieg CNC Lathe

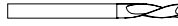


Sieg CNC Mill

N.B. All tool lengths are nominal - see key page 79

Slot Drills

A range of carbide slot drills with tooth forms specially designed for rapid CNC machining in aluminium and plastics.

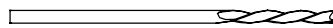


3, 4, 6 and 8mm shank cutters

TA-SDEA-2	2mm (td), 6mm (fl), 3mm (sd), 38mm (ol)	
TA-SDEA-3	3mm (td), 12mm (fl), 3mm (sd), 48mm (ol)	
TA-SDEA-4	4mm (td), 12mm (fl), 4mm (sd), 50mm (ol)	
TA-SDEA-6	6mm (td), 20mm (fl), 6mm (sd), 60mm (ol)	
TA-SDEA-8	8mm (td), 20mm (fl), 8mm (sd), 64mm (ol)	

Long Reach Modelling Slot Drills

A range of long reach carbide slot drills.



Ideal for deep 3D machining

3, 4, 6 and 8mm shank cutters

TA-SDE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
TA-SDE-4	4mm (td), 25mm (fl), 4mm (sd), 75mm (ol)	
TA-SDE-5	5mm (td), 25mm (fl), 5mm (sd), 60mm (ol)	
TA-SDE-6	6mm (td), 25mm (fl), 6mm (sd), 65mm (ol)	
TA-SDE-8	8mm (td), 25mm (fl), 8mm (sd), 80mm (ol)	

Long Reach Ball Nosed Modelling Cutters

A range of long reach carbide ball nosed cutters, ideal for deep 3D machining.



3, 4, 6 and 8mm shank cutters

TA-BNE-3	3mm (td), 20mm (fl), 3mm (sd), 55mm (ol)	
TA-BNE-4	4mm (td), 20mm (fl), 4mm (sd), 60mm (ol)	
TA-BNE-5	5mm (td), 20mm (fl), 5mm (sd), 60mm (ol)	
TA-BNE-6	6mm (td), 25mm (fl), 6mm (sd), 75mm (ol)	
TA-BNE-8	8mm (td), 35mm (fl), 8mm (sd), 100mm (ol)	

RouterCAM Servicing Kits

TMP-RC-GREASEKIT1	RouterCAM 690/1290/1212/1224 Greasing Kit. Includes grease gun and nozzles plus 70g grease.	
TMP-RC-GREASE1	70g Tube of Grease for RouterCAM 690/1290/1212/1224.	
TMP-RC-GREASEGUN1	Grease Gun for RouterCAM 690/1290/1212/1224 (for 70g tube).	
TMP-RC-GREASENOZZ1	Grease Gun nozzles for RouterCAM 690/1290/1212/1224. Various nozzles to fit Grease Gun.	

Sieg CNC Mill Tools

Comprehensive Tool Packs

MT-MM-PK81	Tooling Pack for MP-CM-51 (Includes Swivel Base 75mm machine vice; collet set ER-32 2MT with 15 collets, set of 10 end mills and 10 slots drills, keyed drill chuck and arbor)	
MT-MM-PK83	Tooling Pack for MP-CM-53 (Includes Swivel Base 100mm machine vice; collet set ER-32 R8 with 6 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	

Vices

MT-CM-VC53P	Swivel Base 75mm Machine Vice (c/w 2 T-nuts, 2 flange nuts and 2 studs for MP-CM-51)	
MT-CM-VC54P	Swivel Base 100mm Machine Vice (c/w 2 T-nuts, 2 flange nuts and 2 studs for MP-CM-52)	

Collet Chuck Sets

MT-MM-CCS71	Collet Chuck Set ER25 2MT with 15 collets - 1.5mm - 16mm (for MP-CM-51)	
MT-MM-CCS74	Collet Chuck ER32 INT-30, with 18 collets 2mm - 20mm (for MP-CM-52)	

Tools

MT-MM-EMS71	20 piece end mill / slot drill set (for MP-CM-51/52)	
--------------------	--	--

Sieg CNC Lathe Tools

Comprehensive Tool Packs

MT-LM-PK81	Tooling Pack for MP-CL-51/52 (Includes Live Centre; Keyed Drill Chuck and Arbor; Indexable tools 10mm - 60deg RH, 60deg LH, vee, external threading + blade-type parting tool)	
-------------------	--	--

Tools

MT-LM-TTS47	Indexable lathe tools 10mm 4 piece set (60 deg RH, 60 deg LH, Vee, Boring)	
MT-LM-TTS48	Blade-Type Parting Tool 10mm (Includes blade holder, 1 blade and 1 tip)	
MT-LM-TTS49	External Threading Tool 10mm	

Tool Tips

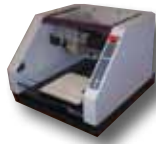
MT-LM-TTT41	Replacement Standard Tip (Insert) for MT-LM-TTS41/42/47	
MT-LM-TTT43	Replacement Parting Tool Tip 2mm (for MT-LM-TTS43/44/45/46/48)	
MT-LM-TTT49	Replacement Tip (Insert) for MT-LM-TTS49	

Milling / Routing / Engraving - Tools

EGX-350E/RotoCAMM TS-30E/CAMM 2 EGX-300/400/600 & PNC-2300/A



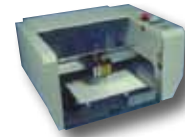
EGX-350E



TS-30E



EGX-300/E



PNC-2300/A

N.B. All tool lengths are nominal - see key page 79

Collets & Sacrificial Beds

TechSoft have developed a system of special multi-purpose tool holding collets. This system utilises a replacement upper and lower collet for use with the larger, more sturdy 4.36mm (11/64 inch) tools which we supply. When using more than one tool, the upper collet (if left on the cutter) acts as a depth stop. This makes setup very quick and simple. (One lower collet and two upper collets are included in the TechSoft Training Pack supplied free with each machine.) Extra collets are available as follows:

TA-LC-TS30	Lower collet (replacement) (TS-30E, EGX-350E)	
TA-LC-1164	Lower collet (replacement) (EGX-300/E, PNC-2300/A)	
TA-UC-1164	Upper collets for 4.36mm tools (pk of 3)	
TA-HEXTOOL20	2mm Hex Tool for collet adjustment	
TC-TS30-BED	White Styrene Sacrificial Bed for RotoCAMM TS-30/MDX-40/MDX-40A	
TC-CAMM2-BED	White Styrene Sacrificial Bed for EGX-350, EGX-300, CAMM 2 PNC-2300/A	
TC-EGXACR-BED	Pre-cut, acrylic baseplate for EGX-350 Lower Bed	
TC-EGX MDF-BED	305x230x18mm MDF for EGX-350 Lower Bed	

Engraving Tools

40 deg

40 deg. carbide tipped vee point engraving tools, ground to an included angle of 40 deg. Suitable for engraving most materials, and recommended as a standard tool for all users.

TA-ECT4-40	40°, 4.36mm (sd), 165mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool <i>(N.B. TA-ECT4-40 tool must be returned to TechSoft)</i>	

90 deg

Solid carbide vee point engraving tool ground to an included angle of 90 deg. Designed for making vee grooves in materials such as 2mm styrene. If the groove is machined "almost through" the material may be folded and glued, useful for box manufacture, etc.

TA-EC4-90	90°, 4.36mm (sd), 165mm (ol)	
TA-ECT-REPLACE	Replacement re-sharpened engraving tool <i>(N.B. TA-EC4-90 tool must be returned to TechSoft)</i>	

Printed Circuit Board Drills

A range of specialist PCB drills in tungsten carbide.

TA-PD4-0.8	0.8mm (td), 10mm (fl), 4.36mm (sd), 145mm (ol)	
TA-PD4-1	1mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	
TA-PD4-1.2	1.2mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	
TA-PD4-1.5	1.5mm (td), 10mm (fl), 4.36mm (sd), 140mm (ol)	

Tool Packs

TP-MIX-350E	Mixed Tool Pack (General set of tools) <i>(Save £5)</i> <i>(TA-UC-1164, TA-ECT4-40, TA-SD4-2, TA-SD4-4, TA-BN4-2)</i>	
TP-PCB-350E	PCB Tool Pack (Specialist PCB tools) <i>(Save £5)</i> <i>(TA-UC-1164, TA-ECT4-40, TA-SD4-2, TA-PD4-0.8, TA-PD4-1)</i>	

Ball Nosed Cutters

General purpose round ended cutters in carbide. They are ideal for 3D modelling, particularly in modelling wax or foam.

TA-BN4-2	2mm (td), 6mm (fl), 4.36mm (sd), 145mm (ol)	
TA-BN4-3	3mm (td), 7mm (fl), 4.36mm (sd), 145mm (ol)	
TA-BN4-4	4mm (td), 7mm (fl), 4.36mm (sd), 160mm (ol)	

Slot Drills

General purpose milling/drilling slot drills in solid carbide. These tools (particularly in sizes 2mm and above) are specially designed to produce a good surface finish on plastic materials such as styrene and acrylic.

TA-SD4-0.5	0.5mm (td), 3mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-0.8	0.8mm (td), 4mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-1	1mm (td), 5mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-1.5	1.5mm (td), 5mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-2	2mm (td), 6mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-2.5	2.5mm (td), 8mm (fl), 4.36mm (sd), 140mm (ol)	
TA-SD4-3	3mm (td), 12mm (fl), 4.36mm (sd), 150mm (ol)	
TA-SD4-4	4mm (td), 15mm (fl), 4.36mm (sd), 160mm (ol)	

Routing Cutters

Half Round

Good general purpose tools for milling/drilling/routing in materials such as plastic and wood. Carbide tipped. The straight flute does not clear swarf very efficiently, thus care must be taken with deeper cuts.

TA-RCT4-50-2	2mm (td), 5mm (fl), 4.36mm (sd), 165mm (ol)	
TA-RCT4-50-3	3mm (td), 8mm (fl), 4.36mm (sd), 165mm (ol)	
TA-RCT4-50-4	4mm (td), 12mm (fl), 4.36mm (sd), 165mm (ol)	

Routing Cutters - Three Quarter Round

Similar to the half round cutters, but slightly more inclined to clogging. However, they are very strong and relatively difficult to break if accidentally overloaded.

TA-RCT4-75-2	2mm (td), 6mm (fl), 4.36mm (sd), 165mm (ol)	
TA-RCT4-75-3	3mm (td), 10mm (fl), 4.36mm (sd), 165mm (ol)	
TA-RCT4-75-4	4mm (td), 10mm (fl), 4.36mm (sd), 165mm (ol)	

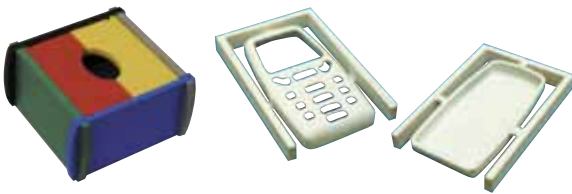
Double Sided Tape



Good quality double sided tape is strongly recommended for holding work to the bed of all models of RotoCAMM, SRM-20E, MODELA, CAMM 2 and MODELA PRO. Many tapes have "done away with the tape" and are effectively just a layer of glue. These stick well, but leave a gummy residue which is difficult to remove from both the work and the bed. We stock a "proper" tape, which sticks well, but can easily be removed from the workpiece. We cannot over-emphasise how important it is to your sanity to use this tape, or one similar, for work holding.

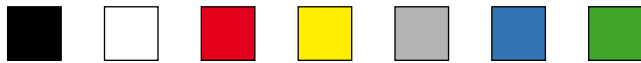
TA-TAPE	EPVC double sided tape 12mm x 33m	
TA-TAPE3	PVC double sided tape 50mm x 33m	

Forex® Classic



Forex classic is a high quality closed cell rigid PVC foam supplied in sheets. Its versatility is unequalled among creative sheet materials. It can be machined nearly four times as fast as acrylic. It can be milled, sawn, drilled, welded, glued, screwed, nailed, riveted, heat bent and painted. TechSoft are the UK educational distributor for this world renowned material. TechSoft stock Forex classic in 3, 5 and 19mm thicknesses.

N.B. Forex® classic is a PVC based material and therefore should not be used on a laser cutting machine (PVC produces dangerous by-products if laser cut).



Black White Red Yellow Grey Blue Green

N.B. Colours shown are only an indication. 19mm Forex Classic only available in white.

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

Nominal size: 610 x 500mm

T AFC6-3-P1	Mixed Pack of 7 Forex Classic Sheets (3mm) <i>One of each colour</i>	
T AFC6-3-COL*	Forex Classic Sheet (3mm)	
T AFC6-5-P1	Mixed Pack of 7 Forex Classic Sheets (5mm) <i>One of each colour</i>	
T AFC6-5-COL*	Forex Classic Sheet (5mm)	
T AFC6-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 500x400mm (for Modela Pro II MDX-540E)

T AFC5-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC5-3-COL*	Forex Classic Sheet (3mm)	
T AFC5-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC5-5-COL*	Forex Classic Sheet (5mm)	
T AFC5-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 400x305mm (for Modela MDX-50E)

T AFC7-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC7-3-COL*	Forex Classic Sheet (3mm)	
T AFC7-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC7-5-COL*	Forex Classic Sheet (5mm)	
T AFC7-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 305x305mm (for RotoCAMM MDX-40AE, MDX-40E, TS-30E)

T AFC4-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC4-3-COL*	Forex Classic Sheet (3mm)	
T AFC4-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC4-5-COL*	Forex Classic Sheet (5mm)	
T AFC4-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 305x230mm (for EGX-30E, Camm 2 PNC2300/A)

T AFC3-3-P1	Mixed Pack of 3 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC3-3-COL*	Forex Classic Sheet (3mm)	
T AFC3-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC3-5-COL*	Forex Classic Sheet (5mm)	
T AFC3-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 200x150mm (for SRM-20E, Modela MDX-20E)

T AFC2-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC2-3-COL*	Forex Classic Sheet (3mm)	
T AFC2-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC2-5-COL*	Forex Classic Sheet (5mm)	
T AFC2-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 150x100mm (for Modela MDX-15E)

T AFC1-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC1-3-COL*	Forex Classic Sheet (3mm)	
T AFC1-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC1-5-COL*	Forex Classic Sheet (5mm)	
T AFC1-19-WH	Forex Classic Sheet (19mm, white)	

Nominal size: 86x55mm (for iModela iM-01)

T AFC0-3-P1	Mixed Pack of 21 Forex Classic Sheets (3mm) <i>3 of each colour</i>	
T AFC0-3-COL*	Forex Classic Sheet (3mm)	
T AFC0-5-P1	Mixed Pack of 14 Forex Classic Sheets (5mm) <i>2 of each colour</i>	
T AFC0-5-COL*	Forex Classic Sheet (5mm)	
T AFC0-19-WH	Forex Classic Sheet (19mm, white)	

Milling / Routing / Engraving

Materials

Acrylic

TechSoft stock a range of acrylics suitable for milling. See page 27 for details.



Rotary Engraving Laminates



Photograph engraved using PhotoVCarve
Flexible White on Black



Keyfob engraved from 2D Design
Flexible brushed aluminium on black

Engraving laminate works by having a base material covered with a thin layer of a contrasting colour. As the material is engraved, the base colour is revealed to decorative effect.

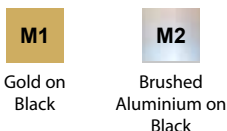
We stock two types of rotary engraving laminates, rigid and flexible. The rigid material has a hard shiny finish and is very durable. It is great for door signs, etc., but it is quite abrasive and is expensive at £15.50 for a 610 x 610 x 1.5mm sheet. However, it is ideal for projects such as jewellery where only small amounts would be used. Typically a key fob could easily be machined in less than a couple of minutes and would cost less than 20p. Quick whole class projects can now be a doddle!

N.B. Rotary engraving laminate is not suitable for use with laser cutters, see Laser Engraving Laminates, page 28

F-Colour includes:



M-Colour includes:



R-Colour includes:



N.B. Colours shown are only an indication.

Nominal size: 610 x 610mm

TAP-FCOL*	F-Colour Flexible Rotary Engraving Laminate	
TAP-MCOL*	M-Colour Flexible Rotary Engraving Laminate	
TAP-RCOL*	R-Colour Rigid Rotary Engraving Laminate	

Nominal size: 500 x 400mm (for Modela Pro II MDX-540E)

TAP5-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP5-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP5-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 400 x 305mm (for Modela MDX-50E)

TAP7-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP7-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP7-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 305 x 305mm (for RotoCAMM MDX-40AE, MDX-40E)

TAP4-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP4-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP4-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 305 x 230mm (for EGX-30E, Camm 2 PNC2300/A)

TAP3-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP3-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP3-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 200 x 150mm (for SRM-20E, Modela MDX-20E)

TAP2-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP2-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP2-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 150 x 100mm (for Modela MDX-15E)

TAP1-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP1-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP1-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

Nominal size: 86 x 55mm (for iModela iM-01)

TAP0-P2	Mixed Pack of 10 Flexible Rotary Engraving Laminate. <i>One of each colour (F and M colours)</i>	
TAP0-FCOL*	F-Colour Flexible Rotary Engraving Laminate.	
TAP0-MCOL*	M-Colour Flexible Rotary Engraving Laminate.	

* When ordering, where COL is included in the order code, please change this to indicate the actual colour required from the charts above.

PCB Materials

We stock two PCB materials FR4 and FR2. FR4 material is resin based, glass reinforced, 1oz copper coated, PCB laminate. FR2 material is similar in appearance, but uses laminated paper rather than glass. It is not quite so strong, but it is much less abrasive. This means much longer tool life and lower cost, making it an ideal choice for education. FR4 material is available in two thicknesses 1.6mm and 1mm. The 1mm is non-standard, but is ideal for use with plotters when direct plotting.



FR2 Material *(ideal for CAD/CAM)*

Nominal size: 610 x 510 x 1.6mm

TA-FR2-1.6N	FR2 Copper coated laminate single sided sheet	
-------------	---	--

Nominal size: 500 x 400 x 1.6mm *(for Modela Pro II MDX-540E)*

TACB5-5	Pack of 5 FR2 Copper coated laminate single sided sheets	
---------	--	--

Nominal size: 400 x 305 x 1.6mm *(for Modela MDX-50E)*

TACB7-5	Pack of 5 FR2 Copper coated laminate single sided sheets	
---------	--	--

Nominal size: 305 x 305 x 1.6mm *(for RotoCAMM MDX-40AE, MDX-40E)*

TACB4-10	Pack of 10 FR2 Copper coated laminate single sided sheets	
----------	---	--

Nominal size: 305 x 230 x 1.6mm *(for EGX-30E, Camm 2 PNC2300/A)*

TACB3-10	Pack of 10 FR2 Copper coated laminate single sided sheets	
----------	---	--

Nominal size: 200 x 150 x 1.6mm *(for SRM-20E, Modela MDX-20E)*

TACB2-10	Pack of 10 FR2 Copper coated laminate single sided sheets	
----------	---	--

Nominal size: 150 x 100 x 1.6mm *(for Modela MDX-15E)*

TACB1-10	Pack of 10 FR2 Copper coated laminate single sided sheets	
----------	---	--

Nominal size: 86 x 55 x 1.6mm *(for iModela iM-01)*

TACB0-10	Pack of 10 FR2 Copper coated laminate single sided sheets	
----------	---	--

FR4 Material *(ideal for traditional etching)*

TA-FR4-0.8	FR4 Copper coated laminate single sided sheet 575 x 530 x 0.8mm	
TA-FR4-1	FR4 Copper coated laminate single sided sheet 575 x 530 x 1mm	
TA-FR4-1.6	FR4 Copper coated laminate single sided sheet 610 x 510 x 1.6mm	

Jelutong

Jelutong has been used for years, by model makers, as a hand carving material. The nature of the material also makes it well suited to machining on a Roland miller/router. Jelutong is ideal for machining moulds for the LT1 - Low temperature casting system (see page 171). It machines quicker than MDF making it especially good for 3D relief moulds.



TA-JELU-50	Pack of 50 blocks (100 x 70 x 15mm)	
TAJL0-5	Pack of 5 blocks for iModela (86 x 55 x 15mm)	

VCarving Board

Ideal for VCarving and PhotoVCarving this specially manufactured black board has a contrasting top layer with a white spray painted finish. Once VCarved or PhotoVCarved the black board is visible through the top layer and the design or photographic image appears.



Nominal size: 600 x 600 x 9mm

TA-VCB-WB	White on black VCarving board	
-----------	-------------------------------	--

Food Grade Polyethylene

In response to enquiries from teachers we now stock a modelling material which is food grade. This new material offers pupils the chance to design and manufacture such items as confectionery or biscuit moulds. The resulting mould, once washed, is suitable for press moulding to create the final food product.



Nominal size: 500 x 500 x 20mm

TA-FGN	Food grade polyethylene.	
--------	--------------------------	--

Nominal size: 500 x 400 x 20mm *(for Modela Pro II MDX-540E)*

TAFG5	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 400 x 305 x 20mm *(for Modela MDX-50E)*

TAFG7	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 305 x 305 x 20mm *(for RotoCAMM MDX-40AE / 40E)*

TAFG4	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 305 x 230 x 20mm *(for EGX-30E, Camm 2 PNC2300/A)*

TAFG3	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 200 x 150 x 20mm *(for SRM-20E, Modela MDX-20E)*

TAFG2	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 150 x 100 x 20mm *(for Modela MDX-15E)*

TAFG1	Food grade polyethylene.	
-------	--------------------------	--

Nominal size: 86 x 55 x 20mm *(for iModela iM-01)*

TAFG0	Food grade polyethylene.	
-------	--------------------------	--

Modelling Foam

This is an easy machining closed cell rigid foam, ideal for 3D prototyping and modelling. It can be machined at high speed with minimal tool wear. The foam is supplied in two densities. Low density foam allows rough models and prototyping at low cost. High density foam, with its greater structural strength and ability to hold surface detail, is ideal for finished models. The high density foam can also be used as a plug for vacuum forming, (painting is recommended to prevent the foam sticking to the styrene). The foam can also be used as a mould for low melting point alloys for applications such as jewellery manufacture.



Modelling foam is the first choice material for most 3D modelling in schools.

Nominal size: 500 x 400mm (for Modela Pro II MDX-540E)

TAF5-25-6	Low density foam 25mm. 6 blocks	
TAF5-50-3	Low density foam 50mm. 3 blocks	
TAFH5-25-6	High density foam 25mm. 6 blocks	
TAFH5-50-3	High density foam 50mm. 3 blocks	

Nominal size: 400 x 305mm (for Modela MDX-50E)

TAF8-25-6	Low density foam 25mm. 6 blocks	
TAF8-50-3	Low density foam 50mm. 3 blocks	
TAFH8-25-6	High density foam 25mm. 6 blocks	
TAFH8-50-3	High density foam 50mm. 3 blocks	

Nominal size: 305 x 305mm (for RotoCAMM MDX-40AE / 40E)

TAF4-25-10	Low density foam 25mm. 10 blocks	
TAF4-50-5	Low density foam 50mm. 5 blocks	
TAFH4-25-10	High density foam 25mm. 10 blocks	
TAFH4-50-5	High density foam 50mm. 5 blocks	

Nominal size: 305 x 195mm (for Self-Centering Vice, EGX-30E, Camm 2 PNC2300/A)

TAF7-25-12	Low density foam 25mm. 12 blocks	
TAF7-50-6	Low density foam 50mm. 6 blocks	
TAFH7-25-12	High density foam 25mm. 12 blocks	
TAFH7-50-6	High density foam 50mm. 6 blocks	

Nominal size: 200 x 150mm (for SRM-20E, Modela MDX-20E)

TAF2-25-24	Low density foam 25mm. 24 blocks	
TAF2-50-12	Low density foam 50mm. 12 blocks	
TAFH2-25-24	High Density foam 25mm. 24 blocks	
TAFH2-50-12	High Density foam 50mm. 12 blocks	

Nominal size: 150 x 100mm (for iModela MDX-15E)

TAF1-25-48	Low density foam 25mm. 48 blocks	
TAF1-50-24	Low density foam 50mm. 24 blocks	
TAFH1-25-48	High density foam 25mm. 48 blocks	
TAFH1-50-24	High density foam 50mm. 24 blocks	

Nominal size: 86 x 55mm (for iModela iM-01)

TAFH0-20-6	High Density Foam 20mm. 6 blocks	
-------------------	----------------------------------	--

N.B. Due to the nature of the very fine dust produced by this material, vacuum extraction **MUST** be used on the RotoCAMM, CAMM 2 and all models of MODELA and CAMM 3, to prevent ingress into bearings and potential inhalation by operators.

Modelling Board

When product designers and pattern makers need to machine a high quality part they often use a specialist modelling board. TechSoft's modelling board has a very fine structure and excellent machining properties which both help to produce a smooth paintable surface. TechSoft even supply a colour matched adhesive specially formulated for this type of modelling board. Modelling board is the ideal choice for those wanting a durable and professional quality 3D model.



Nominal size: 500 x 500mm

TA-MB-25	25mm thick modelling board.	
TA-MB-50	50mm thick modelling board.	
TA-MB-100	100mm thick modelling board.	

Nominal size: 500 x 400mm (for Modela Pro II MDX-540E)

TAMB5-25	25mm thick modelling board.	
TAMB5-50	50mm thick modelling board.	

Nominal size: 400 x 305mm (for Modela MDX-50E)

TAMB7-25	25mm thick modelling board.	
TAMB7-50	50mm thick modelling board.	

Nominal size: 305 x 305mm (for RotoCAMM MDX-40AE, MDX-40E)

TAMB4-25	25mm thick modelling board.	
TAMB4-50	50mm thick modelling board.	

Nominal size: 305 x 230mm (for EGX-30E, Camm 2 PNC2300/A)

TAMB3-25	25mm thick modelling board.	
-----------------	-----------------------------	--

Nominal size: 200 x 150mm (for SRM-20E, Modela MDX-20E)

TAMB2-25	25mm thick modelling board.	
TAMB2-50	50mm thick modelling board.	

Nominal size: 150 x 100mm (for Modela MDX-15E)

TAMB1-25	25mm thick modelling board.	
TAMB1-50	50mm thick modelling board.	

Nominal size: 86 x 55mm (for iModela iM-01)

TAMB0-25	25mm thick modelling board.	
-----------------	-----------------------------	--

Colour Matched Adhesive

TA-MB-GLUE	Colour matched two part polyurethane based glue (1kg Resin and 1kg Hardener)	
-------------------	--	--

Machining Plastic

This is a rigid plastic with excellent machining properties. It has very good resilience and dimensional stability. It also has good sliding wear resistance making it excellent for bearing surfaces, and good electrical insulating properties making it ideal for use in all sorts of electronics projects.



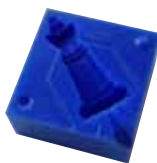
In appearance it is similar to nylon, but with a slightly less shiny surface. It machines superbly using standard HSS or carbide tooling, without the melting and stringing problems associated with most plastic materials. Although significantly more expensive than, say, modelling foam, this material is perfect for most 3D manufacturing projects that need a structural outcome. Ideal for one off GCSE and A level projects for example.

*** When ordering, where WB is included in the order code, please change this to W or B to specify whether white or black is required.**

TA-MP25-WB*	Machining Plastic 500 x 500 x 25mm	
TA-MP50-WB*	Machining Plastic 500 x 500 x 50mm	

Modelling Wax

This is a hard blue wax formulated specifically for ease of machining. It allows articles to be modelled at high feeds and speeds, thus ensuring the shortest possible machining time. It is ideal for vacuum forming over, and it also makes an excellent mould for casting resin. Although initially expensive, this should be regarded as an investment, as it may be melted down and re-cast in simple moulds (such as baking trays), for re-use.



Nominal height: 17mm

TAMW0-2	Machinable Modelling Wax 86 x 55 x 17mm. 2 blocks	
----------------	--	--

Nominal height: 38mm

ZW-100-TS	Machinable Modelling Wax 176 x 75 x 38mm. 5 blocks	
ZW-200	Machinable Modelling Wax 176 x 75 x 38mm. 5 blocks	

Nominal height: 40mm

RS-WAX4	Machinable Wax Block 125 x 75 x 40mm	
RS-WAX3	Machinable Wax Block 150 x 90 x 40mm	
RS-WAX1	Machinable Wax Block 300 x 90 x 40mm	

Nominal height: 50mm

RS-WAX5	Machinable Wax Block 170 x 100 x 50mm	
----------------	---------------------------------------	--

Nominal height: 55mm

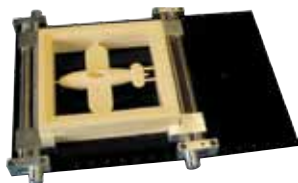
RS-WAX7	Machinable Wax Block 100 x 100 x 55mm	
RS-WAX8	Machinable Wax Block 200 x 200 x 55mm	
RS-WAX6	Machinable Wax Block 300 x 150 x 55mm	

Wax Bars:

RS-WAX9	Machinable Wax Bar 250 x 25 dia. mm	
RS-WAX10	Pack of Machinable Wax Bars, 150mm length, 25-80mm diameters	

Self-Centering Vice

3D machining one side of an object is easy, but if the object needs to be machined all round how do you hold it? TechSoft have designed a low cost solution to this problem, a special self-centering vice. 3D objects are machined into a block, which can then be accurately turned over for machining the other surface (two sided machining). Complex objects can be machined from four sides. The vice fits easily onto the existing bed and can be quickly removed when not required.



The use of the self-centering vice is fully supported within Visual Toolpath (see page 21) for both 2 and 4 sided machining.

For RotoCamm MDX-40AE, MDX-40E, TS-30E & TS-400E, Modela Pro II MDX-540E

* When ordering please specify machine.

RL-ROTO-VICE*	Self-Centering Vice (inc. TechSoft Training Pack)	
RL-ROTO-VICEV*	Self-Centering Vice & Visual Toolpath (inc. TechSoft Training Pack) (Save £40.00)	

Materials Packs

These packs have been created by popular demand to take the hassle out of ordering, and to give a modest cost saving overall. Each pack contains a generous selection of materials particularly suited to the machine listed. Ideal as a basic stock, for back-up and for developing projects using different materials. We have included a roll of our 'firm-grip, clean-peel' double-sided tape and a spare sacrificial bed.

TPM2-IMOD1	Mixed Pre-Cut Materials Pack for iModela, iM-01 (Save £5) Contains rotary engraving laminate (TAP0-P2); Forex Classic (TAF0-3-P1, TAF0-5-P1); PCB engraving laminate (TACB0-10); high density foam (TAFH0-20-6); modelling board (TAMB0-25-3); sacrificial bed (TA-IMOD1-BED); double-sided tape (TA-TAPE)	
TPM2-MDX15	Mixed Pre-Cut Materials Pack for MDX-15E (Save £15) Contains rotary engraving laminate (TAP1-P2); Forex Classic (TAF1-3-P1, TAF1-5-P1); PCB engraving laminate (TACB1-10); high density foam (TAFH1-40-50); modelling board (TAMB1-25-5); sacrificial bed (TC-MDX15-BED); double-sided tape (TA-TAPE)	
TPM2-MDX20	Mixed Pre-Cut Materials Pack for SRM-20E/MDX-20E (Save £15) Contains rotary engraving laminate (TAP2-P2); Forex Classic (TAF2-3-P1, TAF2-5-P1); PCB engraving laminate (TACB2-10); high density foam (TAFH2-40-24); modelling board (TAMB2-25-5); sacrificial bed (TC-MDX20-BED); double-sided tape (TA-TAPE)	
TPM2-MDX40	Mixed Pre-Cut Materials Pack for MDX-40AE (Save £15) Contains rotary engraving laminate (TAP4-P2); Forex Classic (TAF4-3-P1, TAF4-5-P1); PCB engraving laminate (TACB4-10); high density foam (TAFH4-25-10, TAFH4-50-5); modelling board (TAMB4-25-2); sacrificial bed (TC-TS30-BED); double-sided tape (TA-TAPE)	
TPM2-MDX50	Mixed Pre-Cut Materials Pack for MDX-50E (Save £17) Contains rotary engraving laminate (TAP7-P2); Forex Classic (TAF7-3-P1, TAF7-5-P1); PCB engraving laminate (TACB7-5); high density foam (TAFH8-25-6, TAFH8-50-3); modelling board (TAMB7-25-2); sacrificial bed (TC-MDX50-BED); double-sided tape (TA-TAPE)	
TPM2-MDX540	Mixed Pre-Cut Materials Pack for MDX-540E (Save £27) Contains rotary engraving laminate (TAP5-P2); Forex Classic (TAF5-3-P1, TAF5-5-P1); PCB engraving laminate (TACB5-5); high density foam (TAFH5-25-6, TAFH5-50-3); modelling board (TAMB5-25-2); machining plastic (TA-M25-B); sacrificial bed (TC-MDX540-BED); double-sided tape (TA-TAPE)	
TPM2-EGX350	Mixed Pre-Cut Materials Pack for EGX-350E (Save £10) Contains rotary engraving laminate (TAP3-P2); Forex Classic (TAF3-3-P1, TAF3-5-P1); PCB engraving laminate (TACB3-10); sacrificial bed (TC-CAMM2-BED); double-sided tape (TA-TAPE)	

Mains Switching Unit

The MSU links your miller/router and extraction unit, so that the extraction unit automatically switches on and off. This handy little unit also has a manual over-ride facility to allow manual cleaning of the machine.



For RotoCamm MDX-40AE, MDX-40E, TS-30E & TS-400E, EGX-350E, CAMM2 PNC-2300/A & EGX-300E, Modela Pro MDX-500E & MDX-650E, Modela MDX-50E

RL-ROTO-SWITCH	Mains Switching Unit	
-----------------------	----------------------	--

Cables

CB031	2mm USB 2.0, AM-BM, Cream Lead (for Brother, OKI & Roland machines)	
CB039	5m USB 2.0, AM-BM, Black Lead (for Brother, OKI & Roland machines)	
CB042	3m USB 2.0, AM-AM, Clear Lead (for LaserCAM)	
CB034	MDX-15/20 USB to Serial Adaptor	
CB035	2m Cat 5E Lead Patch Blue	
CB036	10m Cat 5E Lead Patch Blue	
CB037	5m Cat 5E Lead RJ45 Crossover, Yellow	
CB038	10m Cat 5E Lead RJ45 Crossover, Yellow	

Basic Electricity and Electronics

Locktronics



Simplifying electricity

Locktronics remains the system of choice for teaching the basics of electricity in over half of UK school science departments - but it has huge potential for Design and Technology too. Locktronic solutions now provide teaching applications for schools, universities and industry and the technology covers everything from simple circuits through analogue and digital electronics to microprocessor control. Customers include blue-chip names such as Rolls Royce, Porche and General Motors, to name just a few. Locktronics is based around a simple, robust base board with a grid of connecting pillars. Electronic components are mounted on a sturdy carrier with the appropriate circuit symbol bonded into the upper surface. These then snap into the grid to effectively reproduce the circuit diagram but with real components. As students build and test the circuit, they will be maintaining a strong, tangible link between theory and practice. If they turn the carrier over, the component itself is visible making it a short step to soldering their own project circuits. All Locktronic kits are supplied with comprehensive teaching materials in digital format. Worksheets can be freely copied or made available to students. Locktronic kits neatly pack away into robust cases which makes classroom management very easy. The system is proven to be mechanically and electronically robust so will cope with years of enthusiastic use by students of all ages.



Fundamentals of Electricity



Covers everything students need to know about conductors and insulators, simple switches and connecting output devices such as lamps and motors. Series and parallel circuits are explored and students learn how to read and draw conventional circuit diagrams. Although aimed at KS2 science requirements, the Fundamentals solution is perfect to help D&T students at KS3 understand, design, model and test the simple circuits that they need for projects including using E-Textiles elements.

Prices £* *See Pricing Information on page 2

EL-LK6444	Locktronics - Fundamentals of Electricity	
-----------	---	--

PICmicro Systems



Programmable components are an essential for KS3 D&T and provide a rich resource for clever and relevant D&T project work at KS4. The PICmicro Solution uses a pre-programmed PIC controller that snaps into the Locktronics base board. Input and output devices from previous work are then snapped into place. The PIC controller is then switched to replicate the common logic gates that are fundamental to all digital devices. Using a variety of inputs, outputs and logic functions, students construct and test some fascinating solutions to familiar problems.

Prices £* *See Pricing Information on page 2

EL-LK8922-2	Locktronics - PICmicro Microcontroller Systems	
-------------	--	--

Electricity Magnetism and Materials



An introduction to electronics that provides students at KS3 with the knowledge they need and a sound foundation for future work with digital and analogue systems. Practical exercises lead students through the concepts of voltage, current, resistance and electrical power and their relationship using Ohms Law is introduced. Further exploration of conductors and circuits leads to the idea of a semiconductor. LEDs, LDRs and Thermistors are explored as useful input devices for simple electronic control systems.

Prices £* *See Pricing Information on page 2

EL-LK9071-2	Locktronics - Electricity, Magnetism and Materials	
-------------	--	--

Energy and Environment



Some lively and relevant exercises explore our need for energy and how we can measure energy use to make judgements. Green sources of energy are tested and measured but can these be relied on for a continuous supply? Practical ways of storing energy are investigated which develops into understanding the need for energy management. In conclusion, students will build and program input devices and energy sources through an on-board PICmicro-controller to provide energy that meets demand but is sustainable. There are no easy answers!

Prices £* *See Pricing Information on page 2

EL-LK7345-2	Locktronics - Energy and the Environment	
-------------	--	--



Teach coding with the BBC micro:bit

For some students (and teachers) coding can be daunting, but the BBC micro:bit is a powerful handheld, fully programmable computer designed to be classroom-friendly from day one. Spiritual successor to the BBC Micro of the 1980s (which itself introduced a generation of children to computing) the BBC micro:bit carries on this 30 year tradition doing it 18 times faster on a scale 70 times smaller than its predecessor.

How does it work?

No software is required - code can be prepared using one of the simple block editors provided on the BBC micro:bit website, or using JavaScript, Python, Scratch or Microsoft's Touch Develop. There are also free apps for Apple and Android devices. The program is compiled using your preferred editor and then transferred wirelessly or via USB directly onto your BBC micro:bit. It couldn't be more simple.



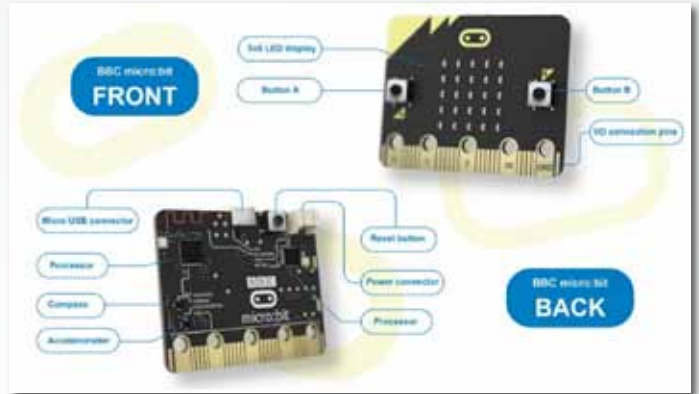
What can it do?

Featuring a matrix of 25 individually programmable LEDs, two integrated push buttons and a range of motion and environment sensors, the device makes a great introduction to the world of programmable components. The large main I/O rings are easy to connect to with crocodile clips or conductive thread. These can be used as outputs to control LEDs, motors and much more, as well as connections for external sensors and switches. More than 200 different activities and resources are available, from simple experiments to creative coding challenges.

The BBC micro:bit is the ideal way to get students engaged and actively involved in writing software and building new things that will be controlled by it. Wireless, Bluetooth Low Energy technology makes it simple to connect to mobile phones and tablets, take a selfie or drive the music playlists. All of this in a device only 5cm wide!

These skills will be vital for so many jobs in the future, and it's great to see that the BBC micro:bit has shown young people there's no need to be daunted. Sinead Rocks, BBC Director, Education

Students have enormous enthusiasm for the micro:bit. The BBC have released figures stating that 88% agree that the BBC micro:bit helped them to see that coding isn't as difficult as they thought it was, and that half of teachers who've used the micro:bit now feel more confident teaching coding.



Micro:bit Features:

- Micro-USB and wireless connectivity via Radio and Bluetooth Low Energy (BLE)
- 25 individually programmable LEDs (5 x 5 LED matrix)
- Motion Sensors: Digital Compass & Accelerometer
- Environment Sensors: Light & Temperature
- 2 x programmable buttons
- 23 x external connection pins with the option to use a 21 pin edge connector
- 5 x rings for 4mm banana plugs or crocodile clips (3 x general purpose I/O, 2 x power)

Micro:bit Specifications:

Dimensions: 42(W) x 52(D) x 11.7(H)mm

Weight: 8g

Power Requirements: 2x AAA batteries or external USB power source

Processor: 32-bit ARM Cortex M0 CPU (16K RAM 16MHz)

BBC micro:bit with Accessories



BBC micro:bit (Board Only)

A portable, low power, user programmable computer.

EL-BM10



BBC micro:bit (Board Only) Retail Pack

A portable, low power, user programmable computer. In retail packaging.

EL-BM11



Project Examples

Electronic Control & Coding

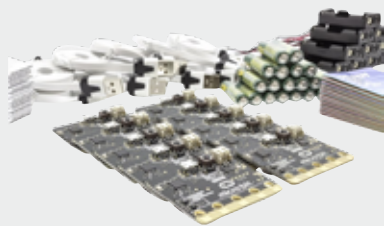
BBC micro:bit Accessories

BBC micro:bit with Accessories



BBC micro:bit Starter Kit. Contains BBC micro:bit, 1m anti-tangle USB cables, AAA battery cage and 2 AAA batteries.

EL-BM12



BBC micro:bit 10 Student Classroom Pack. Contains 10 BBC micro:bits, 10 1m anti-tangle USB cables, 10 AAA battery cage and 20 AAA batteries.

EL-BM13



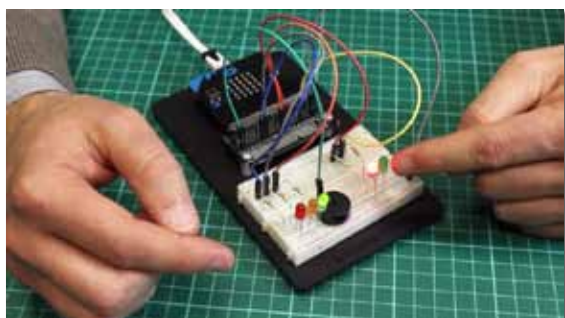
BBC micro:bit with MI:pro Case and Accessories. Contains a BBC micro:bit, MI:pro protector case, 1m anti-tangle USB cable and a AAA battery pack.

EL-BM14



BBC micro:bit with MI:power Board and Cable. Contains a BBC micro:bit, MI:power board, 1m anti-tangle USB cable.

EL-BM15



BBC micro:bit Add-Ons



Fizz bit Module - Create Your Own Vibrating Robot

EL-BM7 Single

EL-BM7-10 Pack of 10



E-Textiles Kit for the BBC micro:bit

EL-BM17



Edge Connector Break out Board (Unbuilt) for BBC micro:bit. Gives access to all the important pins on the bottom edge of the BBC micro:bit.

EL-BM1 Single

EL-BM1-10 Pack of 10



Edge Connector Break out Board (Built) for BBC micro:bit. Gives access to all the important pins on the bottom edge of the BBC micro:bit.

EL-BM1B



(micro:bit not included)

Mi:pro Mountable Case for BBC micro:bit. A 'mountable' case for the BBC micro:bit featuring two keyhole mounting slots.

EL-BM4



(micro:bit not included)

Mi:pro Protector Case for BBC micro:bit. Keeps the BBC micro:bit in perfect condition and also allows access to the bottom edge pins. Available in clear, blue, green & orange. *Please state colour required.*

EL-BM5



(micro:bit not included)

Prototyping System for BBC micro:bit. Break out all 21 pins of the BBC micro:bit and easily connect additional components using this Prototyping System.

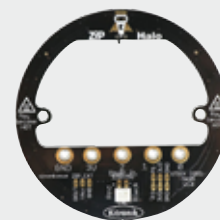
EL-BM6



Audio Cable for BBC micro:bit

EL-BM20 Single

EL-BM20-10 Pack of 10



ZIP Halo for the BBC micro:bit.

EL-BM23 Single

EL-BM23-10 Pack of 10

Inventors Kit

The Inventor's Kit is a great way to get started with programming and hardware interaction with the BBC micro:bit, and a fantastic way for students to learn about constructing and controlling electronic circuits. The kit contains everything you need to complete 10 experiments including using LEDs, motors, LDRs and capacitors.

The easy to follow tutorial book included provides all the information you will need to get the most out of the kit.



Contents include: Mounting Plate, Potentiometer & Finger Adjust Spindle, 2 x Plastic Spacer 10mm, Sticky Fixer for Battery Pack, Small Prototype Breadboard, Terminal Connector, 4 x Push Switch, Motor, Transistor, 2 x Red 5mm LED, 2 x Orange 5mm LED, 2 x Yellow 5mm LED, 2 x Green 5mm LED, RGB 5mm LED, Fan Blade, 5 x 2.2KΩ Resistor, 5 x 10KΩ Resistor, 5 x 47Ω Resistor, Edge Connector Breakout Board for BBC micro:bit, Miniature LDR, 10 x Male to Male Jumper Wires, 10 x Male to Female Jumper Wires, 470uF Electrolytic Capacitor, Piezo Element Buzzer, 4 x Pan Head M3 Machine Screw



Inventors Kit for BBC micro:bit

- EL-BM3 Single
- EL-BM3-20 Pack of 20



BBC micro:bit with Inventor's Kit & Accessories
Contains a BBC micro:bit, Inventor's Kit, 1m anti tangle USB cable and a AAA battery pack.

EL-BM16

:MOVE Mini Buggy

The :MOVE mini for the BBC micro:bit is a two wheeled robot that is suitable for autonomous operation or wireless remote control projects, which makes an exciting introduction to robotics. Adding a pen increases the possibilities, and various add-ons such as a line following board are also available. The buggy also has 5 x RGB individually programmable ZIP LEDs (NeoPixel compatible) – these can be used as indicators, reverse lights etc. To steer, the two continuous rotation servo motors can be controlled independently by altering the PWM (Pulse Width Modulation) signal to the servo – this is easy to do using the Servo blocks in the Microsoft MakeCode block editor. Custom blocks for the included Servo:Lite board, and a range of free and simple training resources are available to make the task of coding as quick and painless as possible.



Contents include: Set of chassis parts, 2 x Micro 360 degree continuous rotation Servos with accessories, Servo:Lite board, 2 x Counter sunk M3 6mm screw, 5 x Counter sunk M3 8mm screw, 6 x M2 16mm Pan head steel screw, 6 x M2 Hex Full Width Nut, 3 x AAA Batteries



:MOVE Mini Buggy Kit (excluding Micro:bit)

- EL-BM30 Single
- EL-BM30-20 Pack of 20



(buggy not included)

Line Following Add-On for the :MOVE mini

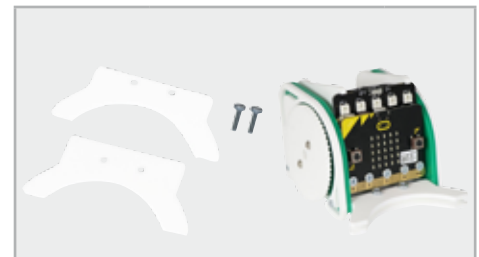
- EL-BM34 Single
- EL-BM34-10 Pack of 10



(micro:bit & buggy not included)

Tipper Trailer Add-On for the :MOVE mini

EL-BM31



(micro:bit & buggy not included)

Bumper Add-On for the :MOVE mini

EL-BM33



Servo:Lite Board for the :MOVE mini

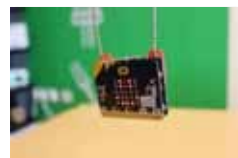
EL-BM35



(micro:bit & buggy not included)

Bulldozer Add-On for the :MOVE mini

EL-BM32



Raspberry Pi

What is a Raspberry Pi?

The Raspberry Pi is a low cost, credit-card sized computer that can plug into a standard computer monitor/touchscreen or TV. It can be used with a standard keyboard and mouse and/or a touchscreen. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages such as Scratch.

The latest model is the Raspberry Pi 3 Model B+ which includes a 64-bit 1.4Ghz quad core processor, 1GB of RAM together with 4 USB ports and 300Mbit/s ethernet. A micro SD slot supports the addition of an SD card where the operating system is stored along with any files.

Which Operation System Will I Need?

Beginners should start with 'NOOBS' – New Out Of the Box Software. This is an easy operating system installer which contains Raspbian, the official supported operating system. It also provides a selection of alternative operating systems which are then downloaded from the internet and installed.

Raspbian comes pre-installed with plenty of software for education, programming and general use. Software includes Python, Scratch, Sonic Pi, Java, Mathematica and more.

We supply a 16GB Micro SD Card with NOOBS pre-installed on it.

What Else Will I Need?

You will definitely need a Raspberry Pi power supply before you can do anything. You will also need either a Raspberry Pi Touchscreen or a standard mouse, keyboard and monitor. If you want to keep things safe, you will need protective cases for the Raspberry Pi itself and the touchscreen.

We sell a complete pack including all these parts – see EL-RP2PK2 opposite.



PC in your hand



Raspberry Pi and Accessories



Raspberry Pi 3 Model B+. Raspberry Pi computer with 64-bit 1.4Ghz quad core processor, 1GB of RAM, 4 USB ports, 300Mbit/s ethernet, Wi-Fi and Bluetooth.

EL-RP2



Raspberry Pi 3 Model B+ c/w SD Card, Power Supply and Case. Includes Raspberry Pi 3 Model B+, 16GB SD Card pre-installed with NOOBS, Power Supply, Case.

EL-RP2PK1



Raspberry Pi 3 Model B+ Touchscreen Pack.

Includes Raspberry Pi 3 Model B+, 16GB SD Card pre-installed with NOOBS, Power Supply, Case, 7" Touchscreen, Touchscreen Case.

EL-RP2PK2



16Gb Micro SD Card - SanDisk Class 10 Pre-Loaded with NOOBS. NOOBS stands for New Out of Box Software. On first boot, you are given the choice of six recommended OS including Raspian (the recommended OS), OSMC, LibreELEC and Windows 10 IoT Core

EL-RPSD1



Official Black Raspberry Pi 3 Case.

EL-RPCS1



Official Black Raspberry Pi 5.1V 2.5A International Power Supply. (for UK, EU, USA & AUS)

EL-RPPS1



LCD (Official Raspberry Pi 7" Touchscreen Display).

EL-RPLCD1



Official Raspberry Pi 7" Touchscreen Display Case.

EL-RPDCS1



Display Case for Raspberry Pi 7" Touchscreen. Available in black, green, blue, purple, red and orange.

EL-RPDCS2

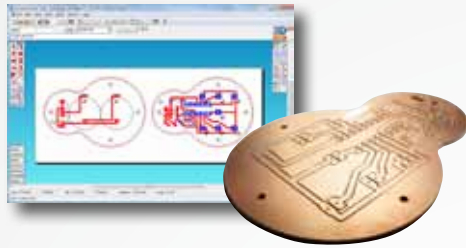


Raspberry Pi Camera Module V2 (Official Camera Board).

EL-RPWC1

Guillotines, Lightboxes & Drill

CAD/CAM PCB Manufacture



PCB Design and Manufacture

TechSoft 2D PCB software (see pages 14-15) provides a student-friendly means to design circuit boards of almost any complexity. The output side of the package is (in effect) a fully-featured application in its own right and offers three PCB production options.

Printing Artwork

Output to a printer will provide the necessary 1:1 scale artwork needed for UV exposure and photo-etching. Tracks and pads will automatically be solid-filled in black and inverted for the solder layer.

Self-Adhesive PCBs

Stika and CAMM 1 knife-cutting machines (see pages 33-35) will happily cut self-adhesive 'Cutronics' copper foil. Output from 2D PCB will produce an accurate knife-cut track layout that can be peeled and stuck to a suitable substrate.

Engraving PCBs

Isolation engraving is well-proven for commercial PCB prototyping and has many benefits in education. Output from 2D PCB automatically inverts the design and creates a tool path around and between each pad and track. Any of TechSoft's CNC milling machines (see pages 64-71) will quickly engrave copper-clad board to isolate each track, cut the board to profile and drill precisely at pad centres.

UV Exposure Light Boxes



These cost-effective units enable controlled UV exposure of PCB artwork onto pre-sensitised copper-clad board. Both feature a pressure pad in the lid which, when clipped shut, keeps the artwork in close contact with the board for faithful reproduction of intricate designs. Operation could not be simpler. Once the laminate and artwork are in place, exposure time is set on the control panel and exposure is stopped when the time is up.

Specifications	LV202E	LV204
Maximum Board Size:	229 x 159mm	356 x 260mm
UV Source:	2 x 8W	4 x 15W
Timer:	Mechanical 0-6 mins	Digital 0-500 seconds
Weight:	4kg	14kg
Dimensions:	420(W) x 175(D) x 90(H)mm	515(W) x 400(D) x 120(H)mm
Power Requirements:	240V, 13A Socket	
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2
AR-LIGHTBOX7	UV Exposure Light Box LV202E	
AR-LIGHTBOX6	UV Exposure Light Box LV204	

Guillotines



These powerful guillotines provide the safest and most accurate means of trimming PCB laminate to size. Cutting with a guillotine avoids harmful dust, rough edges and blunted blades that result from sawing – especially when working with modern epoxy-glass boards. Safety is ensured by heavy Perspex blade shields and a safety latch to prevent inadvertent operation. Both feature a recessed rule on the bed which aids dimensional accuracy and helps secure the workpiece.

Specifications	DM9001	DM9018
Cutting Capacity:	305mm	457mm
Thickness Capacity:	Plastics 2mm, PCB Laminate 2mm, Aluminium 1.5mm	
Weight:	8kg	14kg
Dimensions:	245(W) x 440(D) x 670(H)mm	360(W) x 570(D) x 700(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2
MM-GUILLOTINE6	12" 305mm PCB Guillotine (DM9001)	
MM-GUILLOTINE9	18" 457mm PCB Guillotine (DM9018)	

Dremel PCB Drilling Station



A complete package for PCB drilling featuring a Dremel DM403 variable speed drill, three carbide bits and a robust stand. The stand adjusts to allow up to 100mm clearance below the collet and has a cam-operated lever to provide smooth control of the drilling action. The operating lever can be swapped for left or right hand operation. A robust nylon case and dependable sleeve bearings will ensure long life and quiet operation.

Specification	
Drilling capacity:	1/8" Collet (0.8, 1.00, 1.2mm TC bits supplied)
Spindle Speed:	10,000-33,000rpm (Variable)
Spindle Travel:	15mm
Spindle Height above Table:	80 - 100mm adjustable
Motor:	125W
Weight:	0.45kg (drill only)
Dimensions:	230 x 150mm (stand baseplate)
Power Requirements:	240V 1A
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-DRILLPCB3	Dremel Drilling Station (Includes a DM403 variable speed Dremel Drill, Stand and 3 Tungsten Carbide Drill Bits)	

Pneumatic, Electronic & Control Tech. Trunking

This trunking is modular and designed to mix and match types together into continuous runs, including corner sections using joining brackets. The rugged steel constructed body and fascia panel is assembled with tamper proof screws requiring a dedicated driver (supplied).



For workstations see page 214

Prices £* *See Pricing Information on page 2



MP Trunking includes 2 x twin 13A switched sockets internally wired.

SF-TRUNKMP12	MP Trunking 1200mm	
SF-TRUNKMP15	MP Trunking 1500mm	
SF-TRUNKMP18	MP Trunking 1800mm	



MPELV Trunking includes 2 x twin 13A switched sockets internally wired; key switch controlled low voltage facilities being a fixed 5 volt and stepped 5,9,12 and 15V DC dual rail supply.

SF-TRUNKMPELV12	MPELV Trunking 1200mm	
SF-TRUNKMPELV15	MPELV Trunking 1500mm	
SF-TRUNKMPELV18	MPELV Trunking 1800mm	



MPLV Trunking 1200mm includes 2 x twin 13A switched sockets internally wired; key switched and short circuit protected low voltage facilities being a fixed 5 volt dc supply and dual rail +/- 2-15V variable supply set by reading the accurate analogue volt meter.

SF-TRUNKMPLV12	MPLV Trunking 1200mm	
SF-TRUNKMPLV15	MPLV Trunking 1500mm	
SF-TRUNKMPLV18	MPLV Trunking 1800mm	

Accessories

SF-TRUNKOCORN1	Corner Trunking Unit 800mm for SF-TRUNKMP/MPELV/MPLV	
SF-TRUNKOCORN2	Corner Trunking Unit 1000mm for SF-TRUNKMP/MPELV/MPLV	
SF-TRUNKOJB	Joining Bracket for SF-TRUNKMP/MPELV/MPLV	
SF-TRUNKOENDC	Endcap for SF-TRUNKMP	
SF-TRUNKOFLYP	Flying Lead and Plug for SF-TRUNKMP/MPELV/MPLV	

PECT Trunking Extras



SF-TRUNKOS11



SF-TRUNKOCA1



SF-TRUNKONS

Prices £* *See Pricing Information on page 2

SF-TRUNKOS11	24V Soldering Iron Facility (provides 2 soldering iron sockets) for SF-TRUNKMP/MPELV/MPLV*	
SF-TRUNKOCA1	Pneumatic Check Unit (provides 2 compressed air outlets) for SF-TRUNKMP/MPELV/MPLV*	
SF-TRUNKONS	RJ45 Network Socket for SF-TRUNKMP/MPELV/MPLV*	

* Must be ordered with trunking

Solder Fume Extraction Trunking



The fume extraction trunking fits under all of the P.E.C.T. trunking units including corner sections and attaches end to end. The system is designed to work with the 24V soldering iron facility where soldering irons are fitted with a tip extraction accessory which plugs into the face of the system.

Power Requirements: 240V 5A

Prices £* *See Pricing Information on page 2

SF-SOLDER12	Nortek Solder FumeTrunking 1200mm	
SF-SOLDER15	Nortek Solder FumeTrunking 1500mm	
SF-SOLDER18	Nortek Solder FumeTrunking 1800mm	
SF-SOLDERCORN1	Nortek Solder FumeTrunking Corner 800mm for SF-SOLDER12/15/18	
SF-SOLDERCORN2	Nortek Solder FumeTrunking Corner 1000mm for SF-SOLDER12/15/18	
SFS-TRK-EC1	End Cap for SF-SOLDER Trunking with hole for pipe	
SFS-TRK-EC2	Plain End Cap for SF-SOLDER Trunking	
SFS-TRK-CAP1	Solder Fume Extraction Cap	
SFS-TRK-EXTJ2	Extraction Jointing Plates (one pair)	

For a Solder Fume Extraction Unit which connects directly to the Solder Fume Trunking, see page 191.

24V Soldering Irons with Tip Extraction Kit

These low-voltage soldering irons are every bit as effective as mains voltage versions, but provide the ultimate in security for the user. The 24V supply ensures electrical safety, and a steel extraction tube removes fumes from within a few millimetres of the work. Lightweight flexible tubing is used to carry fumes away to an extraction port. The power cable and extraction tube are clipped together for tidiness and prevent work being impeded.

These soldering irons will be ideal for use with the Solder Fume Extraction Trunking and either MPLV or MPELV trunking fitted with SF-TRUNKOS11 24V outlets.



Prices £* *See Pricing Information on page 2

MM-SOLDIRON1	24 volt Soldering Iron on Stand with Extraction Conversion Tubing	
---------------------	---	--

Pneumatic Air Compressor

A fully-regulated industrial compressor to deliver the required consistent air pressure to trunking fitted with SF-TRUNKOCA1 pneumatic check valves. The compressor is extremely quiet in operation and can be housed in either the mobile or fixed cupboards listed.



Prices £* *See Pricing Information on page 2

MM-COMPRESSOR3A	Bambi BB24V Compressor (0.5hp, 50 litres/min, receiver 24 litres, oil lubricated)	
SF-CB18B	Workstation Compressor Cupboard	
SF-CB18	Mobile Compressor Cupboard	

Etch Tanks, Labstations & Rota-Sprays

Single Etch Tank



A single-function tank for PCB etching where washing and developing (if needed) can safely be dealt with manually. The tank is thermostatically controlled and air-agitated for optimum effect, and the process is controlled via a splash-proof front control panel with neon indicators. The inner tank is a heavy duty one-piece moulding, so leaks are eliminated and any risk from harmful chemicals is minimised. Boards are simply loaded into a mesh basket and processed at a time and temperature to suit the chemical being used.

Specification	
Maximum Board Size:	320(W) x 260(D)mm
Chemical Draining:	Two siphons provided
Weight:	6kg
Dimensions:	180(W) x 525(D) x 380(H)mm
Power Requirements:	240V, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-ETCHTANK3	PCB Etching, PA104 Bubble Etch Tank	

Labstation



These five-tank processing units bring all the necessary processing steps together into a single free-standing unit. The one-piece top includes a moulded sink with hot and cold supply. The three processing tanks are each separated by Spray Wash so a typical sequence would be Develop > Spray Wash > Etch > Spray Wash > Tinning. The third tank could be used for Resist Strip instead, but this is easiest done in the sink using a SN120 strip applicator. Two Labstation sizes are

available and both can be purchased with a starter pack which gives a 25% saving on initial chemical costs.

Specifications	PCB500S Labstation	PCB520S Labstation
Maximum Board Size:	320 x 260mm	520 x 320mm
Weight:	70kg	80kg
Dimensions:	1190(W) x 625(D) x 825(H)mm	
Power Requirements:	240V, 13A Socket	
Services:	Hot and cold water feed via the standard washing machine -type hoses (provided). Drain via standard 32mm push-fit connectors.	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2
MM-ETCHTANK4	PCB 500S Labstation (10" x 12")	
MM-ETCHTANK4P	PCB 500S Labstation (10" x 12") c/w Chemical Starter Kit	
MM-ETCHTANK7	PCB520S Labstation (12" x 18")	
MM-ETCHTANK7P	PCB520S Labstation (12" x 18") c/w Chemical Starter Kit	

Tri Etch Tank Unit



This convenient desk-top unit combines Develop, Wash and Etch facilities to produce solder-ready PCBs following UV exposure. The Develop and Etch tanks are thermostatically controlled and air-agitated for optimum effect. Each process is controlled via the splash-proof front control panel. Boards are simply loaded into a mesh basket and moved in the sequence: Develop > Spray Wash > Etch > Spray Wash. Each tank is a heavy duty one-piece moulding so leaks are eliminated and any risk from harmful chemicals is minimised. The unit has facilities at the rear for standard cold-water and drain connections.

Specification	
Maximum Board Size:	320(W) x 260(D)mm
Chemical Draining:	Two siphons provided
Weight:	10kg
Dimensions:	400(W) x 525(D) x 380(H)mm
Power Requirements:	240V, 13A Socket
Services:	Domestic-type cold water feed valve & drain
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-ETCHTANK1	PCB Etching, PA310 Tri-Tank Unit	

Rota-Spray



Rota-Spray uses the same chemistry as bubble-etch tanks, but sprays heated etchant onto the copper at high pressure, which results in fully etched PCBs in 90 seconds or less. A spray wash chamber is sited alongside so production is a clean and rapid process. In addition, the Rota-Spray Plus model has an unheated Develop chamber to enable an efficient Develop > Wash > Etch cycle in one unit. The chamber sides are clear so the process can be closely monitored at all stages reducing the chance to over-develop or over-etch. The drop-in PCB holder can support multiple boards of different sizes and is fully washed between each chamber - so eliminating cross-contamination of chemicals.

Specifications	Rota-Spray	Rota-Spray Plus
Maximum Board Size:	305 x 254mm	
Weight:	29kg	35kg
Dimensions:	475(W) x 500(D) x 650(H) mm	540(W) x 500(D) x 650(H) mm
Power Requirements:	240V, 13A Socket	
Services:	Cold feed via standard 3/4" BSP washing machine hose. Drain via 40mm compression 90 degree bend. Both supplied.	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

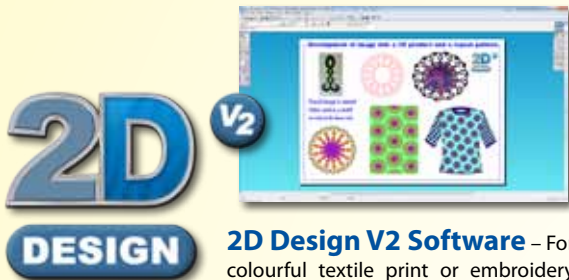
Prices £*		*See Pricing Information on page 2
MM-ETCHTANK6	Rota-Spray Spray Etching Machine (Etch/Spray Wash)	
MM-ETCHTANK5	Rota-Spray Plus, Spray Etching Machine (Develop/Spray Wash/Spray Etch)	
MM-ETCHTANK5A	Base Unit for MM-ETCHTANK5/6	

TECHSOFT TEXTILES

Teaching Textiles

On the following pages you will find a range of the more traditional machines used within the Textiles department - sewing and embroidery machines, overlockers and knitting machines. However, many of our other machines offer the opportunity to develop textiles products across a range of fabrics using laser and knife cutting techniques combined with sublimation printing.

Working exclusively with Brother, the sewing and embroidery machines offered by TechSoft in this Product Guide have been carefully selected with education in mind. However, the full range of Brother machines including those not in this Product Guide, is available from TechSoft.

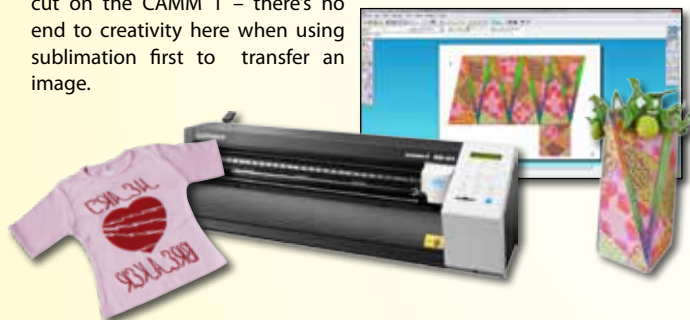


2D Design V2 Software – For colourful textile print or embroidery designs, garment pattern outlines or graphical presentation sheets. See pages 12-13.



Sublimation – Digital printing is easy with sublimation printing – see pages 120-121.

Knife Cutting – For easy surface decoration many textile vinyls can be cut-out using the CAMM 1, then heat applied to fabrics – see pages 34-35 and 44-45. For simple shapes and appliques, the lighter interfacing materials such as Vilene S80 and Decovil Lite (see page 112) can also be cut on the CAMM 1 – there's no end to creativity here when using sublimation first to transfer an image.



Wearable Technology

– a concept which is becoming ever more popular on the High Street – see pages 114-115.



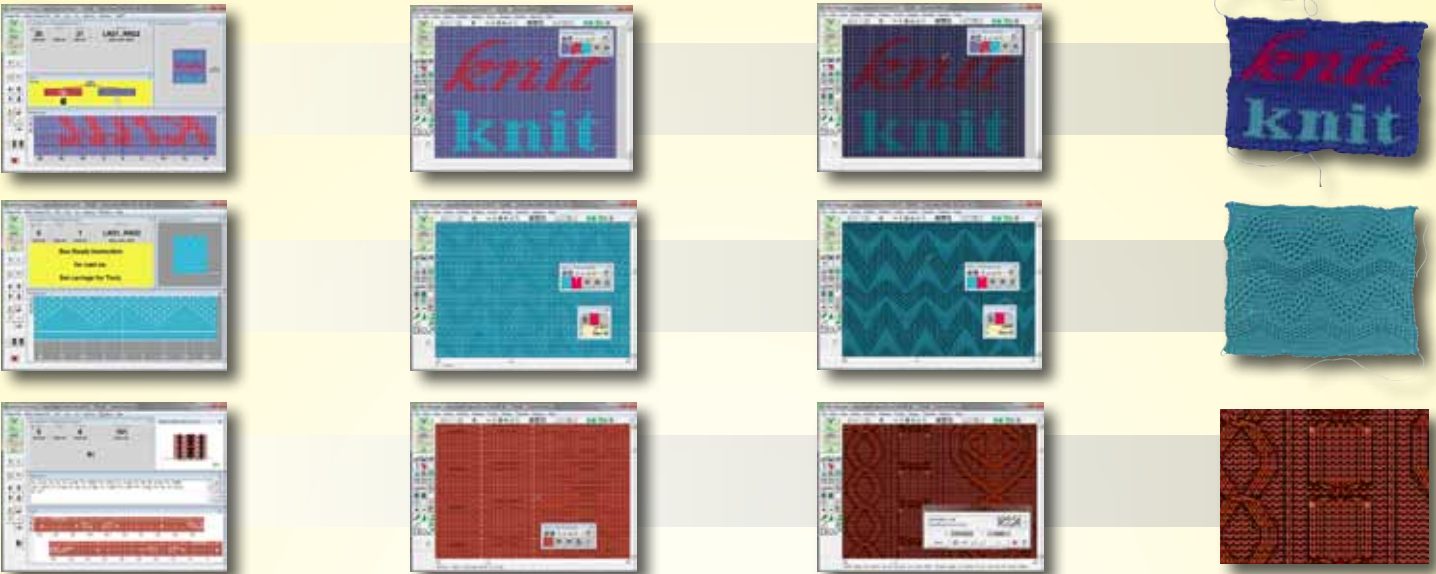
Laser Cutting – Laser cut fabrics for that 'fashionable' look. Create textile products by sublimation then laser-cutting Decovil interfacing material. See pages 23-25.



TechSoft have been suppliers of Brother sewing and embroidery machines to schools, colleges and universities for over seventeen years. A few years ago, by popular request, we opened our "Sewing Innovations" showroom. Visitors are not only given access to a room full of Brother sewing and embroidery machines, but are also shown the techniques of dye sublimation, knife cutting and laser engraving.

Various course for the general public are run at this facility throughout the year, and all information can be found at www.sewinginnovations.co.uk. Visitors are welcome at any time Monday to Friday 9am to 5pm.

DesignaKnit8



User Friendly, Knitting Software

DesignaKnit 8 Complete for Windows is powerful CAD/CAM software for draughting knitwear, designing stitch patterns in colour and/or texture and converting photographs and other graphics to stitches. It is an ideal tool for all designers of hand or machine knit projects. Using the SilverLink 5, patterns can be downloaded in real time to all Silver Reed electronic machines and templates created for punch card machines.

Original Pattern Drafting

Design projects from scratch, or customize and adapt shapes from the Standard Garment Styler.

Stitch Designer

Design your own patterns using a range of tools and effects, or use the Graphics Studio to convert images and photos into stitch patterns.

- Work in yarn colours and/or stitch textures, including cables
- Use Machine Smart Symbols to control slip, tuck and other machine textures
- Use Hand Knit Smart Symbols to generate editable text pattern instructions
- Preview fabric texture
- Use custom brushes and fills
- Check for pattern errors according to knit method
- Print charts, diagrams, templates and text - all of which can be exported via the Windows clipboard
- Lace Tool (optional add-on) for use with the Silver Reed Lace Carriage. Allows you to design the finished pattern. DesignaKnit will work out the separation of the transfer rows.

Integrate Drafted Shapes with Stitch Patterns

Place the pattern blocks onto the stitch pattern and drag with the mouse, or use the cursor keys for fine placement control.

- Cut out and preview results
- Check for pattern mismatches

Interactive Knitting

Using the SilverLink 5 for electronic machines, download the pattern and follow the colour and shape instructions as you knit. (The ScreenLink can be used to access these features with non-electronic machines)

- Preview yarn setup and colour changes
- With the Lace Tool add-on, the DesignaKnit downloads the separated pattern and tells you which carriage to use and at what setting for each pass.
- Listen to instructions and alerts via your sound system

Knitting Machine



The SK830 and SK840 models are part of the Silver Reed Modular Electronic Knitting System. When combined with DesignaKnit 8 software, they offer almost unlimited scope for unique fabric creation with high production speed. The SK830 features 250 needles at 3.6mm pitch so will knit fine fabric using up to 4-ply yarn. The SK840 uses 200 needles and a standard 4.5mm pitch and will knit up to a light double-knit yarn. A SilverLink 5 device will be needed to transfer files from the PC.

Specifications

Needle Pitch:	4.5mm, 5.6 gauge (SK840) 3.6mm, 7 gauge (SK830)
No. of Needles:	200 (SK840), 250 (SK830)
Stitch Types:	Stockinet, Fair Isle, Tuck, Slip, Punch Lace, Weaving, Plating, Motifs
Weight:	13kg (SK840), 14kg (SK830)
Dimensions:	205(W) x 1110(D) x 98(H)mm

Prices £*

*See Pricing Information inside front cover

Knitting Machines

MM-KNITMACH1	Silver Reed SK840 Standard Gauge Knitting Machine		
MM-KNITMACH2	Silver Reed SK830 Fine Gauge Knitting Machine		
Software:		Standard (ex VAT)	*Education Only
SilverLink 5 for all Silver Reed Electronic Knitting Machines. (Links the PC to the knitting machine. The interactive knitting section of DesignaKnit software is used to transfer the pattern, via the Silver Link 5 to the knitting machine) KS006			
DesignaKnit 8 Complete. Software for MM-KNITMACH1/2. KS001			
DesignaKnit 8 HandKnit. KS004			
Extra Licence for DesignaKnit (per user) KS005			

*These products are subsidised for UK bona-fide educational establishments.

Computerised Embroidery

brother Embroidery Software



For Education Use

Creating the Design

Both PE Design Plus 2 and PE Design 10 have libraries of ready-to-embroider borders, motifs and font types that can be combined to produce 'custom' designs for output to any Brother machine. In addition, most types of clip art, a scanned image or even a photograph can be imported and transformed into a stitched output.

For truly original design work use 2D Design V2 (see page 12), then copy and paste into PE Design Plus 2 or PE Design 10 before assigning stitch styles.

Converting To Stitches

Create your image in 2D Design, copy it as a bitmap and paste it into PE Design Plus 2 or PE Design 10.



The embroidery software then uses the Auto Punch feature to analyse the image and convert it into blocks of colour. You can change how many blocks are used, which to omit and also the conversion sensitivity.



Each colour block used will be embroidered and you can assign stitch type, stitch density, and stitch angle to each area of the block. At any stage you can display a realistic preview of how it will look when embroidered and keep adjusting stitch type and colours until the right effect is achieved.



It is easy to combine the library of images and fonts with your original design to create a professional looking embroidered logo.



Machine Applique

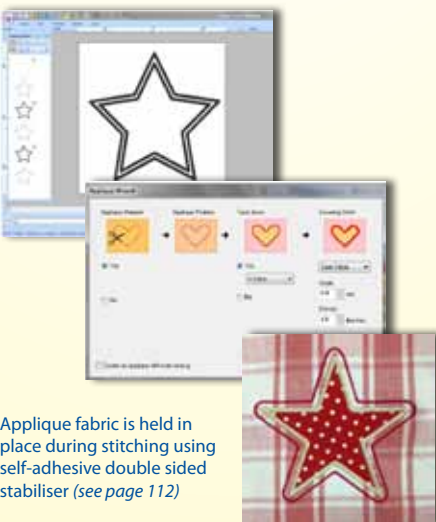
Choose how you wish a design to look – will it be completely stitched or turned into an applique?



Create stitched effects using the programmable fill stitch option.



Use the Applique wizard to effortlessly create machine appliques from your design.



Applique fabric is held in place during stitching using self-adhesive double sided stabiliser (see page 112)

Editing

Older students may wish to use the extensive editing features that allow for customised placement and arrangement of motifs in various formations.



Hoop sizes can be selected and changed at any stage of the designing ensuring that the end design is exactly the correct size before outputting to any Brother machine – hoop sizes can be up to 240 x 360mm with PE Design Plus 2 or 360 x 360mm with PE Design 10, depending on model of machine.



PE Design Plus 2 or PE Design 10?

Both PE Design Plus 2 and PE Design 10 allow images to be imported and then converted to stitches automatically using Auto Punch, Cross Stitch or Photo Stitch styles. In many cases this is all that is needed before the design is output to the embroidery machine, but there are various editing features available for those who want to adjust the stitching. A realistic preview of how it will look when embroidered means that you can go back as often as you like to get just the right effect.

PE Design Plus 2

PE Design Plus 2 is a good starting point for any Textiles department.

PE Design Plus 2 provides 40 in-built fonts and 287 design elements for direct use or for combining, editing and customising. Outline stitches include zigzag, running and motif. Fill stitches include satin, fill, prog. fill, motif and stippling.

Files can be output to any Brother machine with hoop sizes up to 240 x 360mm.



PE Design 10

PE Design 10 is the ideal package for older students who need to work with specialist embroidery design software and want unlimited opportunities to configure every detail of the embroidered effect.

PE Design 10 includes all the functionality of PE Design Plus 2 but adds significant tools to provide a powerful platform for students needing industry specific software with comprehensive creative options. Extra fonts and additional in-built designs provide a total of 130 fonts and over 1000 design elements for direct use or for combining, editing and customising. Additional outline stitches include triple, stem, candlewicking, E/V and chain stitch. Additional fill stitches include piping, cross, concentric circle, radial, spiral, net fill and zigzag net fill. A fabric selector automatically adjusts the sewing attributes for your design based on the fabric you will be using.

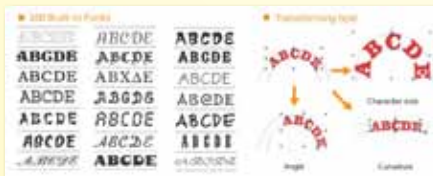
Files can be output to any Brother machine with hoop sizes up to 360 x 360mm.



Stitching features for more expressive embroidery in Design 10

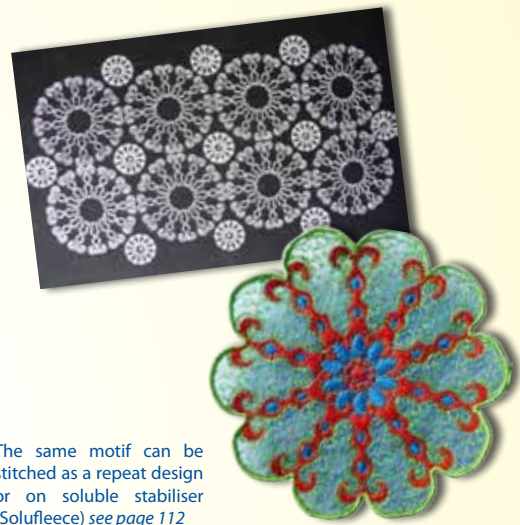


Enhanced lettering features in PE Design 10 allow greater creativity when designing logos



Why Choose PE Design for Education?

- Choose how you want your students to use it – ideal for beginner level but has the potential to extend the brightest students across all age ranges and key stages, including university level.
- Link to 2D Design V2 by allowing students to create their own original artwork and copying it across to PE Design Plus 2 or PE Design 10. This will cut down on bottlenecks that occur when embroidery software is only a single licence.
- Outputting the designs is simple – either by USB data key directly into the machine or via cable linked to the computer. All designs can be saved as a .pes file for future use.
- PE Design Plus 2 and PE Design 10 can be used across all Brother machines.



The same motif can be stitched as a repeat design or on soluble stabiliser (Solufleece) see page 112

Software Information

Minimum Hardware Requirements

Windows Vista / 7 / 8 / 10
Microsoft recommended minimum hardware specification advised
USB Port

Prices £

(See inside front cover)

Standard (ex VAT)

*Education Only

Single Needle Embroidery Machines

PE Design Plus 2 Single Licence TM-EMB-PEDESPLUS2		
PE Design 10 Single Licence TM-EMB-PEDES10		

* Brother subsidise some of their products for UK bona-fide educational establishments.

Computerised Embroidery

brother Multi-Needle Embroidery Machines



Compact, User Friendly, Computerised Embroidery System

There are plenty of ways that CAD/CAM can be included in textiles work. Laser cutting and engraving, sublimation and applied vinyls are just a few, but embroidery has to be an obvious one. Brother's embroidery machines are built on a rigid metal chassis and feature computerised control systems so they are easy to use and have an up to the minute feel and look. Brother has a long-standing reputation for making high-quality sewing and embroidery machines for commercial and domestic markets, so you can be sure of reliability, long life and excellent back-up.

Multi-Needle Systems

The Brother PR-670E and PR-1050X machines are compact multi-needle machines that offer rapid output and large-scale embroidery onto almost any material. Because there is no need to change threads, it is possible to set-up the bobbins and achieve commercial scale production almost immediately. This could well provide a streamlined solution for outputting whole-class sets of work, or clearly give a huge advantage for enterprise projects.

Why choose a multi-needle embroidery machine?

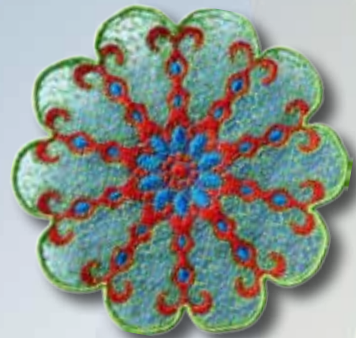
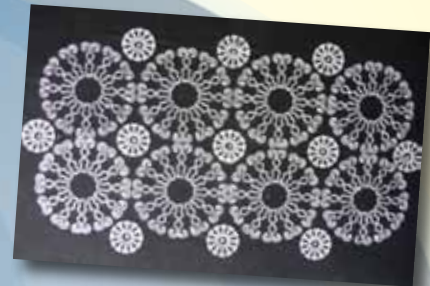
The Brother range of multi-needle embroidery machines provide a reliable and easy to use solution for embroidery needs both in education and small businesses. It is ideal for bringing industrial practice into the classroom and linking into Business Enterprise activities and whole school promotions.

The capacity for up to 1000 stitches per minute allows faster throughput of work and a number of designs could be grouped together in the larger hoops so that a number of pupils' work can be stitched in one go. Thicker materials can be worked on easily and the ever increasing range of hoops allows awkward shapes and spaces to be accessed. The large colour LCD touch screen makes it easy to navigate through the intuitive menu and designs can be customised at this stage, eg., colour changes, addition of text, pattern rotation. Should a thread break or run out, the machine will stop and tell you and it is easy to go back up to 100 stitches at a time, so mistakes can be easily rectified if they occur. Run out of time and design is still incomplete? Simply switch off the embroidery machine and leave the fabric hooped in place. Next time the machine is switched on it will remember where it stopped and continue, giving you peace of mind for those larger stitched projects.

Designing for CNC Embroidery

PE Design 10 provides the ideal platform for students to create designs for the larger hoop sizes available for Brother PR-series multi-needle machines. Designs can be derived from memory cards or extensive on-board font and motif libraries - PE Design 10 allows these to be combined, edited and configured to give almost unlimited creative options. Stitch pattern, density and direction can all be configured in PE Design 10 and these details are often as important

as the original design in achieving a desired effect. Designing in PE Design 10 with direct output also allows the finest possible resolution of embroidered image to the original design. The speed and operational simplicity of Brother PR-series machines makes it simple and efficient to take advantage of these enhanced design capabilities. PE Design 10 can also be used to simply 'process' a design created in 2D Design, scanned from a sketch or downloaded as an image. This may prove a useful facility for younger students taking their first steps with digital embroidery design and output.



Stands for PR Range



TMP-EMB-PRSTAND shown with machine and accessories.

Prices £*

*See Pricing Information inside front cover

TMP-EMB-PRSTAND	Brother Stand for PR Range	
TF-WS3-C2	TechSoft Mobile Workstation 1400x800x850mm (c/w underbench cupboards containing in-built sockets, drawers, shelves and storage space for computer). See page 206.	

Brother PR-670E



The PR-670E is a professional six needle embroidery machine designed for fast commercial production. It achieves real time savings by minimising down time for set-up and thread changing. In education, a PR-670E is the ideal machine for students to experience a production environment and, because job turn-around is so fast, is a huge advantage if an entire class-set of projects needed to be worked.

Specification

Max. Embroidery Area:	300 x 200mm
Embroidery Speed:	400-1000 Stitches per min
Embroidery Designs:	640 built-in & 37 fonts
Positioning:	LED Pointer
Needle Thread & Cut:	Automatic
Touch Screen:	Large, high resolution (with on-screen editing & video instructions and tutorials)
Additional Functions:	Appliqué
Detection Systems:	Thread break & hoop size
Interface:	USB & Memory card slot
Weight:	37kg
Dimensions:	512(W) x 589(D) x 586(H) xmm

What's Included

Hoop Kit - A wide range of embroidery hoops.

Tool Kit - A comprehensive set of tools.

Warranty

UK Mainland: 1 Year Return to Base

Elsewhere: 1 Year Return and Collect

Prices £ (See inside front cover)

Standard (ex VAT) *Education Only (UK)

Product	Standard (ex VAT)	*Education Only (UK)
Brother PR-670E TM-EMB-PR670E		
Cap Frame TM-EMB-PR650CAP		
Cylinder Frame TM-EMB-PR650CYL		
Brother PR-670E with Cap Frame TM-EMB-PR670EWCAP		
Brother PR670E with Cylinder Frame TM-EMB-PR670EWCYL		
Brother PR-670E with Cap & Cylinder Frame TM-EMB-PR670EWCAPCYL		

Recommended Extras

See details of our full range of threads, accessories and materials on pages 110-117.

Starter Set (62 Satin 300m, 144 pre-wound 120m lower bobbins + 19 sheets of A4 Mixed Stabiliser & Interfacing) TA-EMB-SST10

Essential Software

PE Design Plus 2 / 10 (page 102)

Recommended Software

2D Design V2 (page 12)

Brother PR-1050X



The 10-needle PR-1050X sets new standards for accuracy, scale and speed, and features class-leading technology. Auto needle-threading, simple eyelet threading and LED technology for spool management, makes set-up rapid and stress free. The LCD display gives an 'eye onto the needle area' via a built-in camera and this, makes it easy (or even automatic) to position work for precise needle-drop.

Specification

Max. Embroidery Area:	360 x 200mm
Embroidery Speed:	400-1000 Stitches per min
Embroidery Designs:	64 built-in & 37 fonts
Positioning:	Easy with camera sensor
Intelligent Thread:	InnovaChrome™ colour selection
Needle Thread & Cut:	Automatic
Touch Screen:	Large, high resolution (with on-screen editing & video instructions and tutorials)
Additional Functions:	Appliqué
Detection Systems:	Thread break & hoop size
Interface:	USB & Memory card slot
Weight:	54kg
Dimensions:	758(W) x 818(D) x 1049(H) xmm

What's Included

Hoop Kit - A wide range of embroidery hoops.

Tool Kit - A comprehensive set of tools.

Warranty

UK Mainland: 1 Year Return to Base

Elsewhere: 1 Year Return and Collect

Prices £ (See inside front cover)

Standard (ex VAT) *Education Only (UK)

Product	Standard (ex VAT)	*Education Only (UK)
Brother PR-1050X TM-EMC-PR1050X		
Cap Frame TM-EMC-PR1050XCAP		
Cylinder Frame TM-EMC-PR650CYL		
Brother PR-1050X with Cap Frame TM-EMC-PR1050XWCAP		
Brother PR-1050X with Cylinder Frame TM-EMC-PR1050XWCYL		
Brother PR-1050X with Cap & Cylinder Frame TM-EMC-PR1050XWCAPCYL		

Recommended Extras

See details of our full range of threads, accessories and materials on pages 110-117.

Starter Set (62 Satin 300m, 144 pre-wound 120m lower bobbins + 19 sheets A4 Mixed Stabiliser & Interfacing) TA-EMB-SST10

Essential Software

PE Design 10 (page 102)

Recommended Software

2D Design V2 (page 12)

* Brother subsidise some of their products for UK bona-fide educational establishments.

Computerised Embroidery

brother Single Needle Embroidery Machines



Low Cost, Computerised Embroidery Systems

Embroidery only machines allow teachers to set up a dedicated CAD/CAM embroidery area in their classroom, making the process easier to manage without the chopping and changing of machine parts necessary for dual purpose machines. All the machines have an on-board library of embroidery motifs, borders and fonts and it is possible to combine and edit these using the machine's display and control panel. The work area varies between the different models but all have an LCD touch screen which gives you the essential tools for positioning and editing your design, alongside further tools to adjust machine settings. Automatic needle threading and a 'drop-in' bobbin makes these operations simple for beginners, but pupils can produce highly professional results. They can develop their own ideas using 2D Design and export them into the PE Design software for stitch conversion and further editing. These can be saved to a USB memory stick so that their work can be transferred easily to any Brother embroidery machine. Embroidered designs can be added to a variety of fabrics including those with a pile such as fleece or towelling, plus lace effects can look stunning when stitched out on dissolvable stabiliser fabric.



Built-in Embroidery Designs



Built-in Embroidery Fonts



Prices £	(See inside front cover)	Standard (ex VAT)	*Education Only (UK)
----------	--------------------------	-------------------	----------------------

Single Needle Embroidery Machines

Brother Innov-is F440E	TM-EMB-INNOVF440E		
Brother Innov-is NV800E	TM-EMB-INNOV800E		
Brother Innov-is V3	TM-EMB-INNOVV3		

Recommended Extras

See details of our full range of threads, accessories and materials on pages 110-117

Starter Set of Threads for Innov-is Embroidery Only Machines (Contains 62 satin 300m mixed colour threads, 15 white 1,100m 90wt lower thread + 19 A4 sheets mixed stabiliser and interfacing)	TA-EMB-SSST8		
---	--------------	--	--

Essential Software

PE Design Plus 2 / 10 (page 102)

Recommended Software

2D Design V2 (page 12)

What's Included

	F440E	NV800E	V3
Soft Dust Cover:	Yes	Yes	Yes
Handy Wallet of Tools:	Yes	Yes	Yes
Embroidery Hoops:	1 (180 x 130mm)	1 (260 x 160mm)	2 (300 x 180mm & 100 x 100mm)



Warranty

UK Mainland & Ireland: 3 Year Return to Base
Elsewhere: 3 Year Return and Collect

Innov-is F440E



This is the smallest of the three machines but still with a generous embroidery area of 180 x 130mm. Ideal for those occasional embroidery jobs.

Specifications

Embroidery Area:	180 x 130mm
Embroidery Speed:	650 Stitches per min
Embroidery Designs:	138 built-in (+11 fonts)
Arm Length:	190mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	10.2kg
Dimensions:	440(W) x 370(D) x 400(H)mm

Innov-is NV800E



With nearly double the embroidery area of its smaller brother, this machine is not only larger but also faster than the F440E with a stitch speed of 850 stitches per minute.

Specifications

Embroidery Area:	260 x 160mm
Embroidery Speed:	850 Stitches per min
Embroidery Designs:	138 built-in (+ 11 fonts)
Arm Length:	190mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	13.1kg
Dimensions:	693(W) x 451(D) x 300(H)mm

Innov-is V3



The ideal machine for those serious about embroidery with its large embroidery area and long arm for large projects. This machine really moves with a speed of 1050 stitches per min.

Specifications

Embroidery Area:	300 x 180mm
Embroidery Speed:	1050 Stitches per min
Embroidery Designs:	227 built-in (+ 17 fonts)
Arm Length:	285mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	16.5kg
Dimensions:	825(W) x 465(D) x 470(H)mm

* Brother subsidise some of their products for UK bona-fide educational establishments.

Computerised Sewing & Embroidery

brother Sewing and Embroidery Machines



Computerised Sewing & Embroidery Systems

These combination sewing and embroidery machines offer the latest in electronic control systems, a high specification and significant space saving advantage. You also, of course, get two machines for a lot less than it would cost to buy them separately. As sewing machines, they are set up and used in much the same way as their sewing-only counterparts so students will have no trouble moving between machines if one or more of these are used as part of a classroom set. All the machines have an on-board library of embroidery motifs, borders and fonts and it is possible to combine and edit these using the machine's display and control panel.

There are three machines in the range each featuring automatic needle threading and a colour LCD display for ease of use. Auto tension and thread sensors all contribute to the quality output you can expect from any of these machines.

Built-in Embroidery Designs



Built-in Embroidery Fonts



Built-in Sewing Stitches

What's Included

	F480	NV2600	V5
Cover:	Hard Case	Hard Case	Hard Case
Handy Wallet of Tools:	Yes	Yes	Yes
Embroidery Hoops:	2 (300 x 130mm & 180 x 130mm)	2 (260 x 160mm & 180 x 130mm)	2 (300 x 180mm & 100 x 100mm)
Warranty	3 Year Return to Base Elsewhere: 3 Year Return and Collect		
UK Mainland & Ireland:			
Elsewhere:			



Prices £

(See inside front cover)

Standard
(ex VAT)

*Education
Only (UK)

Single Needle Embroidery Machines

Brother Innov-is F480 TM-EMB-INNOVF480

Brother Innov-is NV2600 TM-EMB-INNOV2600

Brother Innov-is V5 TM-EMB-INNOVV5

Recommended Extras

See details of our full range of threads, accessories and materials on pages 110-117

Starter Set of Threads for Innov-is Sewing and Embroidery Combined Machines (Contains 62 satin 300m mixed colour threads, 15 white 1,100m 60wt lower thread + 19 A4 sheets mixed stabiliser and interfacing) TA-EMB-SST9

Essential Software

PE Design Plus 2 / 10 (page 102)

Recommended Software

2D Design V2 (page 12)

Innov-is F480



This entry-level machine is by no means lacking in features and capability. It is ideal for those on a budget but wanting both a sewing and embroidery machine combined.

Specifications

Embroidery Area:	180 x 130mm
Embroidery Patterns:	138 (+11 fonts)
Sewing Stitches:	182 (+10 one step button hole)
Speed:	650 Stitches per min
Arm Length:	190mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	14.7kg
Dimensions:	440(W) x 370(D) x 400(H)mm

Innov-is NV2600



With nearly double the embroidery area of its smaller brother, this machine is not only larger but also faster than the F480 with a speed of 850 stitches per minute.

Specifications

Embroidery Area:	260 x 160mm
Embroidery Designs:	138 built-in (+ 11 fonts)
Sewing Stitches:	232 (+19 one step button hole)
Speed:	850 Stitches per min
Arm Length:	210mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	18.6kg
Dimensions:	693(W) x 451(D) x 300(H)mm (Embroidery)

Innov-is V5



The ideal machine for those who want the best in sewing and embroidery. Large projects are a breeze using the massive embroidery area, long arm and superfast stitch speed.

Specifications

Embroidery Area:	300 x 180mm
Embroidery Designs:	227 built-in (+ 17 fonts)
Sewing Stitches:	473 (+14 one step button hole)
Speed:	1050 Stitches per min
Arm Length:	285mm
Needle Threading & Cutting:	Automatic
Bobbin Winding:	Automatic
Interface:	USB
Weight:	23kg
Dimensions:	825(W) x 465(D) x 470(H)mm

* Brother subsidise some of their products for UK bona-fide educational establishments.

Sewing Machines

brother Sewing Machines

Multi-functional Computerised Sewing Machines

The Innov-is range of computerised sewing machines offer simplicity without compromising on features and performance. The Start/Stop button allows sewing with or without the foot controller attached – often a health and safety issue for teachers and one less piece of equipment to keep track of. The slide speed control feature means that younger or inexperienced pupils can operate the machines with confidence and tricky areas can be stitched with precision and control. The advanced automatic needle threader is quick and simple, thus removing another obstacle for preventing pupils to work independently. The quick set, drop in bobbin makes setting up the machine easy – no more pulling up the bottom thread. The LCD screen allows you to see at a glance information about the stitch you have chosen, and the electronically controlled functions make it straightforward to adjust the stitch sizes in a much more precise and simple way. The jog dial on the Innov-is 15, 27SE and 35 machines make it quick and easy to select your required stitch, whilst the touch pad on the Innov-is 55FE does the same for its wide variety of 81 stitches (plus lettering). With a 3 year warranty, these machines are an excellent choice for school use.



Drop in bobbin with easy to use thread guide



Automatic buttonhole foot for correctly sized buttonholes every time



LCD Control Panel



Stitch Selection

	No of Stitches	LCD Screen	Automatic Needle Threader	Automatic Buttonhole	Needle Position Control	Drop Feed	Speed Control	Cover	Weight	Dimensions
Innov-is 15:	16	Yes	Auto	3 Styles <i>One Step Button Holes</i>	Yes	Yes	Yes	Soft	8.3kg	520(W) x 270(D) x 430(H)mm
Innov-is 27SE:	50	Yes	Auto	5 Styles <i>One Step Button Holes</i>	Yes	Yes	Yes	Hard	8.3kg	520(W) x 270(D) x 430(H)mm
Innov-is 35	70	Yes	Advanced Auto	7 Styles <i>One Step Button Holes</i>	Yes	Yes	Yes	Hard	8.3kg	520(W) x 270(D) x 430(H)mm
Innov-is 55FE	81 <i>(excluding lettering)</i>	Yes	Advanced Auto	10 Styles <i>One Step Button Holes</i>	Yes	Yes	Yes	Hard	8.3kg	520(W) x 270(D) x 430(H)mm

What's Included

These machines all include a handy wallet of tools and either a soft or hard cover (see table above).

Warranty

UK Mainland and Ireland:
Elsewhere:

3 Year Return to Base
3 Year Return and Collect



Prices £

(See inside front cover)

Standard
(ex VAT)

*Education
Only (UK)

Single Needle Embroidery Machines

Brother Innov-is 15 <i>TM-EMB-INNOV15</i>		
Brother Innov-is 27SE <i>TM-EMB-INNOV27SE</i>		
Brother Innov-is 35 <i>TM-EMB-INNOV35</i>		
Brother Innov-is 55FE <i>TM-EMB-INNOV55FE</i>		

Recommended Extras

See details of our full range of threads, accessories and materials on pages 110-117

* Brother subsidise some of their products for UK bona-fide educational establishments.

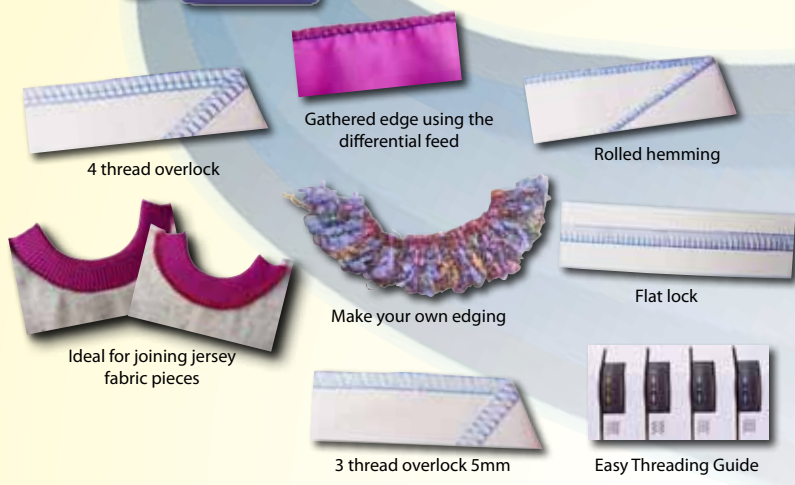
Overlocker & Coverstitch

brother Overlocker & Coverstitch



Low Cost, Easy to Thread Overlocker

The 3034DWT overlocker from Brother sews seams, trims excess fabric and overlocks raw edges all in one easy step. It features 3 or 4 thread sew-and-cut overlock stitches, an easy-to-follow colour coded thread guide and an automatic lower looper threading system. It has a free-arm / flat bed convertible sewing surface for easy control when overlocking cuffs and sleeves, saving time and producing professional results. Overlockers are essential tools for any textiles department and the 3034DWT model will allow great flexibility of use – it isn't just for neatening the edges of seams! Use as a 3 thread or as a 4 thread (with the extra line of stitching for a secure seam), with Overlockers are essential tools for any textiles department and the 3034DWT model will allow great flexibility of use – it isn't just for neatening the edges of seams! Use as a 3 thread or as a 4 thread (with the extra line of stitching for a secure seam), with or without the knife and explore the possibility of rolled hems, decorative edges, flat lock and gathers. The differential feed will assist with virtually any fabric type and eliminates the wavy appearance on stretchy fabrics. It can also be used to gather finer fabrics and give a finished edge all in one operation.



4 thread overlock

Gathered edge using the differential feed

Rolled hemming

Ideal for joining jersey fabric pieces

Make your own edging

Flat lock

3 thread overlock 5mm

Easy Threading Guide

Specifications



Stitch Width:	5-7mm
Feed:	Differential
Knife:	Retractable
Presser Foot:	Pressure Control
Trim Trap:	Yes
Thread Twist Protection:	Yes
Built in light:	Yes LED for Illuminating Working Area
Weight:	9kg
Dimensions:	388 x 355 x 332mm

What's Included

Instructional DVD, Dust Cover, Foot Controller, Tool Kit.

Warranty

UK Mainland & Ireland: 3 Years Return to Base
Elsewhere: 3 Years Return and collect

Prices £*

*See Pricing Information inside front cover

MM-OVLCK7	3034DWT Overlocker	
-----------	--------------------	--



Innovative CoverStitch

The CV3550 coverstitch machine from Brother can be used for creating professional hems, chain stitch and decorative stitching. It is perfect for flat joining seams and edging with elastic and bindings. It is the first domestic coverstitch machine capable of providing a double as well as single sided finish. Triple, wide and narrow cover stitches, as well as chain stitch, can be selected. The differential feed allows many types and weights of fabric to be used. Top stitching can be used to add that extra creative touch to any garment and so will be welcomed by students and teachers alike.



Top Cover Stitch (Narrow)

Triple Cover Stitch

Specifications



No. Threads:	5, 4, 3 and 2
Working Space:	155mm
Thread Tension:	Automatic
Presser Foot:	Pressure Control
Free Arm:	Yes
Foot Type:	Clear

What's Included

Instructional DVD, Dust Cover, Foot Controller, Tool Kit.

Warranty

UK Mainland & Ireland: 3 Years Return to Base
Elsewhere: 3 Years Return and collect

Prices £*

*See Pricing Information inside front cover

MM-COVST1	CV3550 Coverstitch Machine	
-----------	----------------------------	--

Textiles

Threads

Brother Embroidery Threads

High quality embroidery thread which can be purchased in boxed sets or as individual colours (see below).

Brother Embroidery Threads - Satin



TA-EMB-BST22

TA-EMB-BST40

TA-EMB-BST12

TA-EMB-SST-B62	Starter Set of 62 Satin Thread, 300m in Labelled Box (Mixed colours)	
TA-EMB-BST12	Boxed Set of 12 Satin Threads, 300m	
TA-EMB-BST22	Boxed Set of 22 Satin Threads, 300m	
TA-EMB-BST40	Boxed Set of 40 Satin Threads, 300m	
TA-EMB-BST-COL*	Pack of 5 Reels of Satin Thread, 300m 70 standard colours. <i>Please state colour required</i>	

Brother Embroidery Threads - Matt (Country Yarn)



TA-EMB-BMT21

TA-EMB-BMT40

TA-EMB-BMT21	Boxed set of 21 Matt Threads, 300m	
TA-EMB-BMT40	Boxed set of 40 Matt Threads, 300m	
TA-EMB-BMT-COL*	Pack of 5 Reels of Matt Thread, 300m 49 standard colours. <i>Please state colour required</i>	

Brother Embroidery Threads - Metallic

TA-EMB-BET-COL*	Pack of 5 Reels of Metallic Thread, 300m 10 standard colours. <i>Please state colour required</i>	
------------------------	---	--

Brother Bobbin Thread For Brother Sewing & Embroidery Machines

TA-EMB-BLT60W-5	1,100m 60wt. white thread (Pk of 5 reels)	
TA-EMB-BLT60B-5	1,100m 60wt. black thread (Pk of 5 reels)	
TA-EMB-BLT60W-10B	200m 60wt. white thread (Pk of 10 reels)	

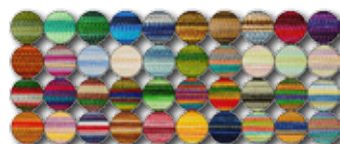
Brother Bobbin Thread For Brother Embroidery Only Machines

TA-EMB-BLT90-5	1,000m 90wt. white thread (Pk of 5 reels)	
TA-EMB-BLT90W-10B	200m 90wt. white thread (Pk of 10 reels)	

Speciality Embroidery Threads

Mirage Embroidery Threads For Brother PR-Range

This is a spaced dyed rayon thread with contrasting tones on a generous 800m spool. Strong and easy to work with, simple designs can be transformed without the need to stop the embroidery machine in order to change colour. Available in 40 colour types.



TA-EMB-WM-COL*	800m Reel of Mirage Embroidery Thread. Available in 40 different colour types.	
-----------------------	--	--



Deco Bob Pre-Wound Bobbins For Brother PR-Range

These pre-wound coloured bobbins are perfect for creating embroidered effects that will be viewed from both sides, eg., working on organza or making hanging shapes. The 80 weight thread is efficiently wound onto 100m spools that fit directly into the Brother PR range of embroidery machines. There are 36 colours available to choose from.



TA-EMB-WD-PK1



TA-EMB-WD-COL

TA-EMB-WD-PK1	Pack of 40 Pre-Wound Bobbins of Deco Bob Thread, 100m each, 80wt. One of each colour + 2 White + 2 Black.	
TA-EMB-WD-COL*	Pack of 12 Pre-Wound Bobbins of Deco Bob Thread, 100m each, 80wt. All same colour. 36 colours available.	

Madeira Embroidery Threads

The Madeira embroidery threads can be used with all of our multi-needle embroidery machines.

Madeira Embroidery Threads For Brother Innov-is and PR-Range



TA-EMB-SST-M20

TA-EMB-SST-M20	Starter set of 20 Classic no. 40 Viscose Rayon Threads, 1000m (Mixed colours)	
TA-EMB-M401*	Classic no. 40 Viscose Rayon, 1000m 299 standard colours <i>Please state colour required</i>	
TA-EMB-M405*	Classic no. 40 Viscose Rayon, 5000m 299 standard colours <i>Please state colour required</i>	

Madeira Pre-Wound Bobbins For Brother PR-Range

PA201	24 pre-wound disposable bobbins, white	
--------------	--	--

Madeira & Aerofil Colour Cards available - see website for details

Sewing and Overlocking Threads

The Aerofil threads are ideal for all of the Brother sewing machines and come in an assorted box of colours. The Aerolock Premium Overlocking thread is sturdy and great for neat and long lasting seams.

Aerofil Sewing and Quilting Threads

TA-EMB-SPK1	Assorted Box of 18 x 200m Threads. Various Colours.	
TA-EMB-ST1-COL*	Pack of 5 Threads (400m each).	

Aerolock Premium Overlock Thread

TA-EMB-OT1-COL*	Box of 4 x 2500m Reels of Overlock Thread. Available in 18 different colours.	
------------------------	--	--

Embroidery Felt

Polyester embroidery felt, 2000mm wide. Priced per metre (whole metres only). Available in white, gold, red, dark red, lime green, emerald green, dark green, dark blue, dark navy blue, brown, light grey and black.

PA300	Embroidery Felt per metre (2000mm wide) <i>Please state length and colour required.</i>	
--------------	--	--

**For choice of colours see our website at www.techsoft.co.uk/Products/TextilesMaterials
Colour cards are also available for Madeira threads.*

Preciosa Crystals

Preciosa are genuine Czech crystals which are multi-faceted (12 facets) to give maximum shine. The Aurora Borealis Crystals act like a prism and reflect the light so as to add some real sparkle to your product. They can be used with a variety of materials and colours.



Heat Applied

The Preciosa Hotfix Flatback Crystals are iron-on or for use with a heat press (see page 123) ideally in conjunction with a Teflon sheet as it is better to protect the surface of the crystals when pressing to release the adhesive. Timings and temperature need testing but 180°C for 10 seconds is a good starting point.

TXCR-H12-AB	Pack of 100 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss12 (3.2mm)	
TXCR-H20-AB	Pack of 100 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss20 (5mm)	
TXCR-H34-AB	Pack of 36 Preciosa Hotfix Flatback Crystals. Aurora Borealis, Size ss34 (7mm)	

Glue-On

For items that cannot be pressed, use the glue-on crystals in conjunction with the Gem-Tac adhesive and a jewel setter applicator. Jewel setters come in packs of two and are an inexpensive method of holding a crystal and positioning it in exactly the correct place.

The ss20 crystals in glue-on also come as clear – this is for use with sewable LEDs when working with E-Textiles. Use Gem-Tac to glue the crystal directly on top of the LED and the light will shine through disguising the LED.

Gem-Tac is a permanent adhesive - it bonds gems, sequins, glitter and rhinestones to lots of fabrics. It will also bond fabrics to glass, vinyl, metal & patent leather. A great multi-purpose adhesive, it is washable, it dries crystal clear and is non-toxic and non-flammable.

TXCR-N12-AB	Pack of 100 Preciosa Glue-on Flatback Crystals. Aurora Borealis, Size ss12 (3.2mm)	
TXCR-N20-AB	Pack of 100 Preciosa Glue-on Flatback Crystals. Aurora Borealis, Size ss20 (5mm)	
TXCR-N20-CL	Pack of 100 Preciosa Glue-on Flatback Crystals. Clear, Size ss20 (5mm)	
TXCR-N34-AB	Pack of 36 Preciosa Glue-on Flatback Crystals. Aurora Borealis, Size ss34 (7mm)	

Application Equipment



TXCR-JS1



TXCR-ADH1

TXCR-JS1	Pack of 2 Jewel Setters. (Used for applying crystals.)	
TXCR-ADH1	2oz bottle Gem-Tac Embellishing Glue for use with Glue-on Crystals.	

Textiles

Stabilisers & Interfacings

Sample Packs

Stabilisers are essential backing materials to prevent fabric distortion and stitch problems when using machine embroidery. Interfacings are used as a stiffening layer hidden between surface fabrics - collars and cuffs are typical examples. Interfacings are (however) excellent construction materials in their own right. They can be cut, sewn, surface-decorated, folded and assembled to open up new and innovative possibilities for textiles work.

TXM-P1	Sample Pack of Stabiliser and Interfacing Materials (Contains 9 A4 sheets of Vilene Stabilisers & Interfacings, i.e., one each of Vilene Stitch & Tear, Fuse & Tear, Soluble (Solufleece), Self-Adhesive (Filmoplast), Vilene S80, S133, Decovil Light & Decovil 1)	
---------------	--	--

Stabilisers

Stabiliser fabric acts as an important second layer to prevent the top fabric from distorting, puckering, catching or being pulled down into the machine. The stabiliser fabric is stretched firmly in the embroidery hoop, usually with the fabric to be worked on top. This prevents the fabric from moving or stretching during the embroidery process. Choosing the right stabiliser fabric can be a minefield. There is a huge variety of makes and types to choose from and they all profess to do different things. TechSoft have narrowed the choice down to four materials from the Vilene range - a company with an excellent reputation for reliability, good value and repeatability.

Stitch and Tear

A non-sticky stabiliser that can be used on all fabrics. Finer fabrics may require more than one layer to prevent movement. Used for all types of decorative sewing, applique and machine embroidery. Tear away loose stabiliser once embroidery is complete.

TXM11-A4-10	10 A4 Sheets Vilene Stitch & Tear Stabiliser	
TXM11-9-15	15m x 900mm roll Vilene Stitch & Tear Stabiliser	

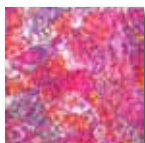
Fuse and Tear

An iron-on stabiliser that is used to back stretch or knitted fabrics or dimensionally unstable woven fabrics. Iron-on dry at a medium heat for 5 seconds. Tear off loose stabiliser after stitching.

TXM12-A4-10	10 A4 Sheets Vilene Fuse & Tear Stabiliser	
TXM12-9-25	25m x 900mm roll Vilene Fuse and Tear Stabiliser	

Soluble (Solufleece)

A water-soluble, non-woven stabiliser for all types of machine embroidery and other creative sewing techniques. Once stitched, it provides the necessary base-fibre to reinforce and integrate stitches to become (in effect) free-standing. Simply draw your design and free-machine or output in the usual way. After machining, simply wash out surplus material in cold or warm water. Use it in the hoop to create lace designs, or place a layer on top of pile fabrics to give a crisper finish by preventing stitches sinking into the pile.



TXM13-A4-10	10 A4 Sheets Vilene Soluble Stabiliser	
TXM13-9-25	25m x 900mm roll Vilene Soluble Stabiliser	

Self-Adhesive (Filmoplast)

A double sided stabiliser that is useful for machine applique. Iron the non-paper side onto your applique material. Remove the paper to reveal the tacky side and then position the applique material as required.



TXM14-A4-10	10 A4 Sheets Vilene Self-Adhesive Stabiliser	
TXM14-5-15	15m x 545mm roll Vilene Self-Adhesive Stabiliser	

Interfacings

These polyester based interfacings are great for painting and sublimation printing. The S80 can be cut on a knife cutter such as the CAMM 1 GS-24E as long as the shapes are simple. All four weights cut beautifully on the laser cutter - try ironing on another fabric to the adhesive side first.

Sew-in Interfacing (Vilene S80)

Polyester, firm sew-in interlining. Use for laser cutting, knife cutting, sublimation printing and embroidery. Can be dyed and painted. Decorate or use as a supportive layer.



TXM01-A4-10	10 A4 Sheets of Vilene S80	
TXM01-3-25	25m x 300mm roll of Vilene S80	
TXM01-9-25	25m x 900mm roll of Vilene S80	

Iron-on Interfacing (Vilene S133)

Very firm and compact fusible interlining. For fabric bowls, brooches, peaks of caps as well as for creative works. Can be dyed, painted, machine stitched or laser cut or just use as a supporting layer. Excellent for 3D work.

TXM02-A4-10	10 Sheets of Vilene S133	
TXM02-3-25	25m x 300mm roll of Vilene S133	
TXM02-4-25	25m x 450mm roll of Vilene S133	
TXM02-9-25	25m x 900mm roll of Vilene S133	

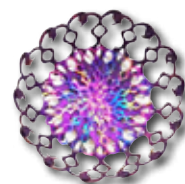
Iron-on Interfacing with a Soft Leather-Like Feel (Decovil Light)

Firm fusible interlining with a soft leather-like feel. This is tear resistant, very stable fabric yet maintains drape. Suitable for laser cutting, sublimation printing, dyeing and printing - it will also fit in an embroidery hoop for computerised machines. Ideal for creative applications such as hats, belts, bags, media cases/book covers, as well as for interior decoration products.

TXM03-A4-10	10 A4 Sheets of Decovil Light	
TXM03-9-15	15m x 900mm roll of Decovil Light	

Iron-on Interfacing with a Firm Leather-Like Feel (Decovil 1)

Very firm fusible interlining with a leather-like feel. Ideal for products that need to maintain their shape. Tear resistant, very stable and non fraying, it machines well and can be laser cut. Excellent for sublimation printing, dyeing or painting and useful for all creative handicrafts, hats, belts, bags, media cases/book covers as well as for interior decoration products.



TXM04-A4-10	10 A4 Sheets of Decovil 1	
TXM04-9-15	15m x 900mm roll of Decovil 1	

Bondaweb

Fabric Fuser

Fine non-woven fabric with adhesive on both sides and paper backing on one. Suitable for all fabrics (including leather at low temperature). Use for applique, mending and general craft work.

TXM21-A4-10	10 A4 Sheets of Vilene Bondaweb	
TXM21-9-25	25m x 900mm roll of Vilene Bondaweb	

Blanca Press



The Blanca Press fills the gap between smaller domestic ironing presses and expensive, large heavy duty laundry equipment. The Blanca Press will stand up to heavy, continuous daily use and its rugged construction has proved it to be very reliable.

Power Requirements: 240V 7A

Prices £*		*See Pricing Information inside front cover
MM-PRESS1	Blanca Press	

FastPress



FastPress is quick to set up on any table or any work surface, light and easy to carry around and takes up very little storage space. The easy to use FastPress features fingertip closing and simple, clear controls.

Power Requirements: 240V 7A

Prices £*		*See Pricing Information inside front cover
MM-PRESS2	FastPress	

FastPress Steam



The new Fastpress Steam has a pressure steam system and has a Teflon coated heating plate which is somewhat hotter for the user than the non-steam version. The steam is very effective where an occasional shot of steam is required for creases in trousers etc., and should not be compared to the continuous flow of a steam iron.

Power Requirements: 240V 10A

Prices £*		*See Pricing Information inside front cover
MM-PRESS3	FastPress Steam	

Dressmaker's Dummy

This Dressmaker's Dummy has an 8-part body to enable the waistline to be lengthened when a longer back measurement is required. The neck is fully adjustable with an auto-set system and useful pin cushion.



Prices £*		*See Pricing Information inside front cover
MM-DUMMY1-P	Dressmaker's Dummy Petite Size Bust 71 - 86cm (28" - 34"), Waist 56 - 74cm (22" - 29"), Hips 76 - 94cm (30" - 37")	
MM-DUMMY1-S	Dressmaker's Dummy Small Size Bust 84 - 104cm (33" - 41"), Waist 59 - 81cm (23" - 31"), Hips 86 - 106cm (34" - 42")	
MM-DUMMY1-M	Dressmaker's Dummy Medium Size Bust 100 - 116cm (39" - 47"), Waist 74 - 94cm (29" - 37"), Hips 102 - 122cm (40" - 48")	
MM-DUMMY1-F	Dressmaker's Dummy Full Figure Size Bust 115 - 134cm (45" - 53"), Waist 97 - 116cm (38" - 46"), Hips 120 - 140cm (47" - 56")	

Ironing Table and Iron

Professional Ironing Table

The Rotondi PVT-30 is a professional ironing table at an economy price. The heated main table features a 3-layer cover and thermostatic heater control. The table supplied is a general purpose form that will suit most applications. An integral vacuum system will hold garments flat onto the form for easy pressing.



MM-IRONBRD2

Weight: 68kg

Dimensions: 1490(W) x 530(D) x 900(H)mm

Professional Steam Iron

The Rotondi Mini 3 is a professional quality iron for use with conventional ironing boards or will be the perfect compliment to the PVT-30 table. The base unit houses a stainless steel 2.15 litre water tank and 1.3kW heater for rapid steam generation. Double protection against over-pressure and heat is built-in. The ergonomically designed iron features an 800W element.



MM-IRONSG1

Prices £*		*See Pricing Information inside front cover
MM-IRONBRD2	Rotondi PVT-30 Ironing Table	
MM-IRONSG1	Rotondi Mini 3 Steam Generator Iron (for use with MM-IRONBRD2)	

E-Textiles

E-Textiles describes a contemporary and exciting new dimension for textile design. Using miniature components and conductive thread, simple LED circuits can be built into any type of textile product - including garments. For the ultimate in bling for dance or evening wear or to take high-visibility to another level, E-Textiles has a great deal to offer. The components we offer here have been developed to make the technique both accessible and reliable and all have a proven track record for success from KS2 to KS5.



How it works?

All the components are designed for easy but discrete stitching to the product and feature a pair of through-hole plated connection terminals. Simply over-sew around each terminal with conductive thread and a reliable circuit can be created. The different components are simply joined together using conductive thread and a small running stitch. No soldering is needed. The conductive thread forms an electrical circuit so the layout must be carefully designed to prevent stitches crossing or touching.

Designing with E-Textiles

Decide on what type, colour and how many LEDs you wish to use and work out their position on the product. They may sit on the surface or could be on a separate layer beneath - it is often easier to work in layers. Decide on what type of switch is required - this could be another component or simply metal press studs or a metal zip. Soft switches can be made from conductive fabric and foam and stitched anywhere in the circuit. Finally, decide where the batteries will best be hidden. A single coin cell will power up to 5 LEDs depending on the type and colours chosen. If necessary, an additional power supply board (or boards) can be added. Simply fix and connect them using a parallel connection and conductive thread.

This Sochi Container was made using S80 non-woven fabric and was printed using the Sawgrass SG400 sublimation printer. This was then cut out on the CAMM 1 knife cutter. The design for the net and all the patterns were created in TechSoft's 2D Design V2. The embroidery on the surface and side stitching was done using a Brother Innov-is 35 sewing machine. Embroidered 3D sections were created using soluble fabric and organza, stitched on the Brother Innov-is V3 embroidery machine - the initial design was created in PE Design Next software. The electronics used were sewable LEDs, 3V power supply and a light sensor, stitched together with conductive thread.



Don't Do Electronics?

You soon will with E-Textiles. All circuits are made using parallel connections for the LEDs with switches connected in series. Each component has positive (+) and negative (-) signs clearly marked and all you do is connect between these. Students will find it helpful to prepare a simple circuit diagram as part of their design work to guide them when building their E Textile product.



This design was created using TechSoft's 2D Design V2 and sent to a CAMM 1 to be cut from textile vinyl. Sewable LEDs were added to the eyes and stitched to the power supply board in the front pocket using a conductive thread. Crystals were glued onto vinyl to reflect light from the LEDs. Flowers were stitched on the organza with soluble fabric stabiliser and were cut out after stitching.

E-Textiles Starter Kit

Contains sewable coin cell holder, 2m thread and colour changing LED, 3 sewable coin cell holders, small conductive thread bobbin (6m), 10 blue sewable LEDs, 10 white sewable LEDs, sewable coin cell holder with built-in power switch, sewable push switch, sewable slide switch, sewable tilt, switch & strip of 5 CR2032 coin cells.



TXEF-PK1	E-Textiles Starter Pack.	
----------	--------------------------	--

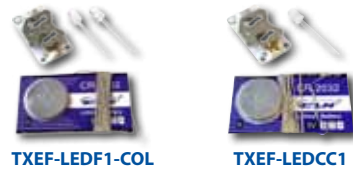
E-Textiles Kit for BBC micro:bit

This kit is a great way to get started with creating BBC micro:bit controlled E-Textiles projects and designs. The kit includes 5 x Sewable Red LED boards, 5 x Sewable White LED boards, 5 x White 5mm Diffused LEDs, 10 x 28mm Crocodile Clips & 1 x Electro-Fashion, Conductive Thread, 6m.



EL-BM17	E-Textiles Kit for the BBC micro:bit	
---------	--------------------------------------	--

Flashing LED Kits



TXEF-LEDF1-COL*	Sewable Flashing LED Kit. (Includes coin cell holder, coin cell, 2m conductive thread, 2 flashing LEDs). Available in blue, green, red and yellow.	
TXEF-LEDCC1	Sewable Colour Changing LED Kit. (Includes coin cell holder, coin cell, 2m conductive thread, colour changing LED)	

Sewable Buzzer



TXEF-BUZZ1	Sewable Buzzer 18x8x6mm	
------------	-------------------------	--

Modules



TXEF-MOD1	E-Textiles Module - Flasher Controller & LEDs.	
TXEF-MOD2	E-Textiles Module - Light Sensor	

Power Boards

The power supply boards featuring CR2032 coin cells will keep more LEDs brighter for longer so are the most popular choice for most students.



TXEF-CCH1	Sewable Coin Cell Holder (34x20x4.5mm, accepts CR2032 batteries)	
TXEF-CCH3	Sewable Miniature Coin Cell Holder (22x12.5x4mm, accepts CR1220 batteries)	
TXEF-CCH2	Sewable Coin Cell Holder with Switch (44x20x4.5mm, accepts CR2032 batteries)	
TXEF-CCH4	Sewable Coin Cell Holder with Latching Switch (44x28x5mm, accepts CR2032 batteries)	

Switches

Push switches only operate while you press them so might best be hidden in a pocket. A slide switch stays on so could be behind a cuff or lapel. A tilt switch operates when moved, if stitched into a sleeve then it could make the LEDs come on when you raise your arm. A latching switch is a push on, push off switch. Magnetic switches are in two parts, if they were stitched into either side of a pocket then the LEDs could be controlled by placing a hand in your pocket.



TXEF-SW1	Sewable Push Switch (18x8.5x6mm)	
TXEF-SW2	Sewable Slide Switch (18x8.5x4mm)	
TXEF-SW3	Sewable Tilt Switch (26x6.5x7mm)	
TXEF-SW5	Sewable Latching Switch (20x20x4mm)	
TXEF-SW4	Magnetic Switch Complete with Magnet	

Batteries

A single CR1220 coin cell is about the size and weight of a 1p coin and will keep a single LED bright for about two hours. The CR2032 coin cell is about the size and weight of a 5p coin and will keep a single LED bright for about 10 hours.

TXEF-BAT1-5	Pack of 5 CR2032 Coin Cell Batteries	
TXEF-BAT2-5	Pack of 5 CR1220 Coin Cell Batteries	

Conductive Thread

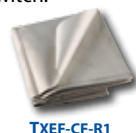
No soldering is needed! Connections are made using conductive thread. Several loops of this are firmly stitched around the connection terminal before being taken to the next terminal with a loose running stitch.



TXEF-CT-2	2m Conductive Thread (on Card)	
TXEF-CT-6	6m Conductive Thread (on Card)	
TXEF-CT-45	45m Conductive Thread (on Bobbin)	
TXEF-CT-250	250m Conductive Thread (on Bobbin)	

Conductive Material

Conductive fabric gives even more opportunities for ingenuity. Small patches can be sewn where they can be deliberately (or randomly) touched together thus making a soft switch.



TXEF-CF-R1	Conductive Fabric (Ripstop, 305 x 330mm)	
-------------------	--	--

LED Boards

There are two sorts of LEDs for use in textiles – the sew on ones that come on their own board and the regular LEDs for traditional electronic work.



TXEF-LEDB10-6-COL*	Pack of 10 Sewable LED Boards (15 x 6.5 x 2.7mm). Available in red, blue, white, green and lilac.	
---------------------------	---	--

Traditional LEDs

To sew these traditional LEDs onto textiles, simply bend the legs so that they are at right angles to the bulb and curl them to form loops, through which conductive thread can be oversewn to make the circuit. Alternatively, the 5mm LEDs can be soldered onto a handy sewable LED holder.

Standard 3mm LEDs (25 degrees)



TX-LED3C-10-BL	Pk of 10 Blue 3mm Water Clear LED (1750mCd)	
TX-LED3C-10-GR	Pk of 10 Green 3mm Water Clear LED (75mCd)	
TX-LED3C-10-OR	Pk of 10 Orange 3mm Water Clear LED (1750mCd)	
TX-LED3C-10-RD	Pk of 10 Red 3mm Water Clear LED (1000mCd)	
TX-LED3C-10-WH	Pk of 10 White 3mm Water Clear LED (2750mCd)	
TX-LED3C-10-YL	Pk of 10 Yellow 3mm Water Clear LED (1000mCd)	

Standard 5mm LEDs (25 degrees)



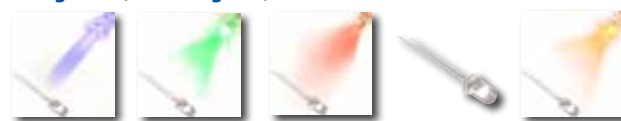
TX-LED5C-10-BL	Pk of 10 Blue 5mm Water Clear LED (1150mCd)	
TX-LED5C-10-GR	Pk of 10 Green 5mm Water Clear LED (1000mCd)	
TX-LED5C-10-OR	Pk of 10 Orange 5mm Water Clear LED (900mCd)	
TX-LED5C-10-RD	Pk of 10 Red 5mm Water Clear LED (1150mCd)	
TX-LED5C-10-WH	Pk of 10 White 5mm Water Clear LED (2250mCd)	
TX-LED5C-10-YL	Pk of 10 Yellow 5mm Water Clear LED (800mCd)	
TXEF-HOLD1	Pk of 10 Sewable 5mm LED Holder (18x8x1mm)	

Pink 4.8mm LED (100 degrees)



TX-LED48C-10-PK	Pk of 10 Pink 4.8mm Water Clear LED (700mCd)	
------------------------	--	--

Flashing LEDs (15/30 degrees)



TX-LED5FC-10-BL	Pk of 10 Flashing Blue 5mm Water Clear LED	
TX-LED5FC-10-GR	Pk of 10 Flashing Green 5mm Water Clear LED	
TX-LED5FC-10-RD	Pk of 10 Flashing Red 5mm Water Clear LED	
TX-LED5FC-10-WH	Pk of 10 Flashing White 5mm Water Clear LED	
TX-LED5FC-10-YL	Pk of 10 Flashing Yellow 5mm Water Clear LED	
TXEF-HOLD1	Pk of 10 Sewable 5mm LED Holder (18x8x1mm)	

Colour Changing LEDs



TX-LED5CC-10	Pk of 10 Colour Changing 5mm LED (diffused, VF 2.7-5, 3000mcd@25mA)	
TX-LED10CC-10	Pk of 10 Colour Changing 10mm LED (diffused, VF 2.7-5, 3000mcd@25mA)	

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

Textiles

Clothing

Clothing

For personalisation with Embroidery, Heat Applied Media and Laser Image Transfer. 100% polyester items are also suitable for sublimation printing.

Hoodies

Classic pull-on style featuring a chunky draw-string for the hood and stretch cuffs and waistband. These tops will keep their shape and keep out the cold. Available in up to 50 colours depending on size required. These quality hoodies are an ideal basis for customising using machine embroidery, Laser Image Transfer or heat-pressed applied vinyl. 80% Cotton, 20% Polyester, 280 gsm.



Adult Size:	XS	S	M	L	XL	XXL	3LX	4XL	5XL
Chest:	34"	36"	40"	44"	48"	52"	56"	60"	64"

Child Size:	XXS	XS	S	M	L	XL
Age:	1/2	3/4	5/6	7/8	9/11	12/13

French Navy (c, s, x)	Oxford Navy (c)	Plum (c)	Purple (c, s)
Royal Blue (c, s)	True Violet	Airforce Blue	Cornflower Blue
Hawaiian Blue (c)	Sapphire Blue (c, s)	Lavender	Sky Blue (c)
Peppermint	Jade (c)	Turquoise Surf	Bottle Green (c)
Olive Green	Moss Green	Kelly Green (c, s)	Alien Green
Kiwi	Lime Green (c)	Apple Green	Desert Sand
Fizzy Lemon	Vanilla Milkshake	Sun Yellow (c)	Gold
Orange Crush (c)	Burnt Orange	Sunset Red	Fire Red (c, s)
Cranberry	Hot Pink (c, s)	Candyfloss Pink (c, s)	Baby Pink (c, s)
Red Hot Chilli (c)	Magenta Magic	Burgundy (c)	Lipstick Pink
Pinky Purple	Hot Chocolate	Jet Black (c, s, x)	Storm Grey
Charcoal (c)	Steel Grey	Heather Grey (c, s, x)	Ash (c)
Moondust Grey	Arctic White (c, s)	N.B. Colours shown are only an indication.	

CL-HD1-1-COL-SZ*	Hoodie (Child Ages 1/2 - 12/13, Chest 24" - 34"). Available in 25 colours marked c above.
CL-HD1-2-COL-SZ*	Hoodie (Adult Sizes XS-XXL, Chest 34" - 52"). Available in 50 colours including white (except size XS where only 12 colours are available marked s above).
CL-HD1-3-COL-SZ*	Hoodie (Adult Sizes 3XL-5XL, Chest 56"-64"). 80% Cotton, 20% Polyester, 280gsm. Available in Heather Grey, Jet Black and French Navy only (marked x above)

* When ordering, where COL-SZ, is included in the order code, please change this to specify the actual colour and size required.

Sweatshirts

Warm and durable with a standard crew neck, these sweatshirts feature stretch cuffs and waistband so will keep their shape after repeated washing. The fabric is smooth on the front, back and sleeves so makes an ideal base for customising with machine embroidery, Laser Image Transfer or heat-pressed applied vinyl. 50% Cotton, 50% Polyester.



Child Size:	S (5-6)	M (7-8)	L (9-11)	XL (12-13)
Age:	26"/28"	30"/32"	34"/36"	38"/40"

Adult Size:	S	M	L	XL	XXL
Chest:	38"	40"	43"	45"	48"

Antique Cherry Red	Antique Sapphire	Ash (c)	Black (c)
Carolina Blue	Charcoal	Cherry Red	Dark Chocolate
Dark Heather	Forest Green (c)	Gold	Heleconia
Honey	Indigo Blue	Irish Green	Kiwi
Light Blue	Light Pink (c)	Maroon	Military Green
Navy (c)	Orange	Parika	Purple
Red (c)	Royal (c)	Sand	Sport Grey (c)
Violet	White (c)	N.B. Colours shown are only an indication.	

CL-SS2-1-COL-SZ*	Sweat Shirt (Child Ages 5/6 - 12/13, Chest 26" - 40"). 255gsm white, 270gsm colours. Available in Ash, Black, Forest Green, Light Pink, Navy, Red, Royal, Sport Grey & White only (marked c above).
CL-SS2-2-COL-SZ*	Sweat Shirt (Adult Sizes S-XXL, Chest 34" - 52"). 255gsm white, 270gsm colours. Available in 29 colours plus white, see above.

Polo Shirts

The standard item for sport, work or casual wear these quality Polo shirts are made from 100% Polyester so can be printed and customised using Sublimation, machine embroidery, Laser Image Transfer or heat-pressed applied vinyl. Available in up to 19 colours depending on size required and made from 140 gsm fabric.



Child Size:	XS	S	M	L	XL
Age:	3-4	5-6	7-8	9-11	12-13

Adult Size:	S	M	L	XL	XXL
Chest:	38"	40"	43"	45"	48"

Artic White (c)	Bottle Green	Desert Sand	Electric Green
Electric Orange	Electric Pink	Electric Yellow	Fire Red (c)
French Navy (c)	Heather Grey	Hot Pink (c)	Jet Black (c)
Lime Green (c)	Olive Green	Orange Crush	Purple (c)
Royal Blue (c)	Sapphire Blue (c)	Sun Yellow (c)	

N.B. Colours shown are only an indication.

CL-PS1-1-COL-SZ*	Polo Shirt (Child Ages 3/4 - 12/13, Chest 24" - 34"). Available in Arctic White, Fire Red, French Navy, Hot Pink, Jet Black, Lime Green, Purple, Royal Blue, Sapphire Blue & Sun Yellow only (marked c above).
CL-PS1-2-COL-SZ*	Polo Shirt (Adult Sizes S-XXL, Chest 38"-48") Available in 19 colours including white, see above.

T Shirts

The humble but timeless 'T'-shirt makes an ideal and economical basis for student project work. These good quality cotton shirts can be customised using machine embroidery, Laser Image Transfer or heat-pressed applied vinyl. Available in up to 27 colours depending on size required.



Child Age:	1/2	2/3	3/4	5/6	7/8	9/11	12/13	14/15
Chest:	24"	25"	26"	28"	30"	32"	34"	36"

Adult Size:	S	M	L	XL	XXL	3XL
Chest:	35"/37"	38"/40"	41"/43"	44"/46"	47"/49"	50"/52"

Ash	Azure Blue (c)	Black (c)	Bottle Green (c)
Brick Red	Burgundy (c)	Charcoal	Classic Olive
Deep Navy (c)	Fuchsia	Kelly Green (c)	Khaki
Lite Graphite	Light Pink (c)	Chocolate	Navy (c)
Orange (c)	Purple (c)	Red (c)	Royal Blue (c)
Sky Blue (c)	Steel Blue	Sunflower (c)	Yellow (c)
Heather Grey (c)	Natural (c)	White (c)	

N.B. Colours shown are only an indication.

CL-TS1-1-COL-SZ*	T-Shirt (Child Ages 1/2 - 12/13, Chest 24" - 34"). 100% Cotton, 165gsm. Available in 15 colours plus natural, heather grey (97% cotton, 3% polyester) and white (160gsm). (Colours maked c above).	
CL-TS1-2-COL-SZ*	T-Shirt (Adult Sizes S-3XL, Chest 35"-52"). 100% Cotton, 165gsm. Available in 24 colours plus white (160gsm), heather grey (97% cotton, 3% polyester) and Ash (99% cotton, 1% polyester).	

Designed for Sublimation Printing



These bright white 'T'-shirts are made from 100% Polyester and are designed specifically to give the brightest and most durable results for Sublimation printing. These shirts cannot be beaten for faithfully reproducing subtleties and true colours in the original design image.

Sublimation Polo Shirts:

Adult Size:	XS	S	M	L	XL	XXL
Chest:	35"	38"	40"	43"	45"	48"

Sublimation T-Shirts:

Child Size:	XS	S	M	L	XL
Age:	3/4	5/6	7/8	9/11	12/3

Adult Size:	XS	S	M	L	XL	XXL	3XL
Chest:	35"	38"	40"	43"	45"	48"	50"

SUB-PS1-2-WH	White Polo Shirt Designed for Sublimation (Sizes XS-XXL, Chest 35" - 48") 185gsm.	
SUB-TS1-1-WH	White T-Shirt Designed for Sublimation (Child Ages 3/4-12/13, XS-XL).	
SUB-TS1-2-WH	White T-Shirt Designed for Sublimation (Sizes XS-3XL, 35"-50").	

Caps

Polyester Caps

100% Polyester 6 Panel Cap, features inner sweatband and adjustable tear and release strap at the rear. Available in 30 colours.



Airforce Blue	Artic White	Ash	Baby Pink
Bottle Green	Burgundy	Charcoal	Desert Sand
Electric Green	Electric Orange	Electric Pink	Electric Yellow
Fire Red	French Navy	Hawaiian Blue	Heather Grey
Hot Chocolate	Hot Pink	Jet Black	Kelly Green
Lime Green	Magenta Magic	Olive	Orange Crush
Purple	Red Hot Chilli	Royal Blue	Sapphire Blue
Sky Blue	Sunshine Yellow		

N.B. Colours shown are only an indication.

SUB-CAP-COL	Polyester Cap. (Available in 30 Colours)	
--------------------	--	--

Cotton Caps

100% Cotton 5 Panel Cap, features Rip-Strip™ size adjuster. Available in 25 colours.



Black	Bottle Green	Bright Red	Burgundy
Chocolate	Classic Pink	Classic Red	Emerald
French Navy	Fuchsia	Gold	Graphite Grey
Kelly Green	Light Grey	Lime Green	Natural
Olive	Orange	Purple	Royal
Sand	Sky	Surf Blue	White
Yellow			

N.B. Colours shown are only an indication.

LIT-CAP10-COL	10 Baseball Caps (100% fine cotton twill) (Available in 25 Colours)	
----------------------	---	--

Aprons

Bib Apron with sliding adjustable buckle, self fabric neck band and ties. 72 x 86cm - 65% Polyester, 35% Cotton Twill, 195gsm Available in 50 colours.

Apple	Aqua	Aubergine	Black
Black Denim	Blue Denim	Bottle	Brown
Burgundy	Chestnut	Cornflower	Cyan
Dark Grey	Emerald	Fuchsia	Grey Denim
Hot Pink	Indigo Denim	Kelly	Khaki
Lavender	Lemon	Light Blue	Lilac
Lime	Magenta	Marine Blue	Mid Blue
Mocha	Natural	Navy	Oasis Green
Olive	Orange	Pink	Purple
Red	Rich Violet	Royal	Sage
Sapphire	Silver	Steel	Strawberry Red
Sunflower	Teal	Terracotta	Turquoise
White	Yellow		

N.B Colours shown are only an indication.

CL-AP1-COL	Bib Apron, One size. (Available in 50 Colours)	
-------------------	--	--

Image Transfer

Laser Image Transfer



Image Transfer onto a Range of Standard Materials

Every department needs a fast, good quality colour printer so why not choose one that will not only deal with high quality 'regular' paper printing, but will also become the heart of a system so versatile that it can transform project outcomes in just about every area of Design and Technology?

The Technology Explained

Laser Image Transfer (LIT) uses a slightly enhanced colour laser printer to transfer images onto special transfer media. The laser toner itself creates the colour image so no special inks or 'extras' are needed. The transfer sheet is then heat-pressed onto almost any 'regular' workshop material to create a crisp, permanent image that reproduces all the colour and vibrancy of the original. The TMT OKI printers we supply are all factory-approved in terms of their LIT enhancement so manufacturer's warranties are unaffected.

LIT/CAM

By integrating LIT and CAD/CAM all sorts of project possibilities emerge. How about LIT-printing onto plywood and then laser-cutting jigsaw puzzles, games or shape-sorter toys? You can either pre-decorate the material, or apply LIT images after the material is cut. The effect will be seen on-screen, on print-outs for the design folder, and on the project itself. So if you want a vacuum formed shell in pink floral pattern (why not) then design the pattern in 2D Design V2, print it onto white HIPS and then form it. The pattern will distort a little as it is vacuum formed but it will stretch smoothly without cracking and, of course, the heat will not affect it.

LIT - A Versatile Solution for Education

For educational use, we believe that LIT has a number of significant advantages for image transfer. LIT and CAD/CAM could be the core technology for a single project, or could enable a range of exciting outcomes all stemming from the same design work in 2D Design V2. Remember that most standard materials you already use will be fine for LIT work and the LIT printer itself can also double as a standard laser printer. For enterprise projects, we supply a range of LIT-ready mouse-mats, mugs, coasters, etc., which will give the ideal raw material.

What about Sublimation?

Sublimation is often the first choice for textiles teachers due to the fact that images tend to be brighter and more durable on textile products - see pages 120-121. Can't decide which to buy? TechSoft offer a combined package for LIT and Sublimation - see page 119.



A4 TMT C612N Printer



A high-quality laser printer with the TMT modification that makes it capable of transferring images onto LIT media. The C612N remains an excellent, fast, colour laser printer for all general A4 paper printing needs.

Specifications

Size: A4
 Ink Colours: Black, Cyan, Magenta, Yellow
 Fuser Unit: TMT Modified Engine Settings
 Banner Print: Up to 1200mm
 Speed: 36ppm Mono, 34ppm Colour
 Resolution: 1200 x 600dpi print quality
 ProQ 2400 Multilevel Technology
 Interface: USB or Ethernet
 Weight: 30kg
 Dimensions: 435(W) x 604(D) x 340(H)mm
 1 Year On-Site (UK Mainland & Ireland)
 Warranty: 1 Year Return and Collect (Elsewhere)
N.B. Warranty extendable to 3 years FOC if registered by user

A4 TMT C7411WT White Printer



A unique TMT modified laser printer with a white toner cartridge (instead of black) which allows it to print bright, true colour images onto coloured paper and LIT media. Images will transfer onto dark (even black) surfaces. Not recommended for general paper printing.

Specifications

Size: A4
 Ink Colours: White, Cyan, Magenta, Yellow
 Fuser Unit: TMT Modified Engine Settings
 Banner Print: Up to 1200mm
 Speed: 36ppm Mono, 34ppm Colour
 Resolution: 1200 x 600dpi print quality
 ProQ 2400 Multilevel Technology
 Interface: USB or Ethernet
 Weight: 28kg
 Dimensions: 435(W) x 546(D) x 389(H)mm
 Warranty: 1 Year On-Site (UK Mainland & Ireland)
 1 Year Return to Base (Elsewhere)
N.B. Warranty extendable to 3 years FOC if registered by user

A3 TMT C8432WT White Printer



All the benefits of the A4 White Printer with the advantage of larger A3 size prints. The C8432WT is suitable for departments wanting a machine capable of larger scale projects with the same professional quality finish.

Specifications

Size: A3
 Ink Colours: White, Cyan, Magenta, Yellow
 Fuser Unit: TMT Modified Engine Settings
 Banner Print: Up to 1200mm
 Speed: 35ppm A4, 20ppm A3
 Resolution: 1200 x 600dpi print quality
 ProQ 2400 Multilevel Technology
 Interface: USB or Ethernet
 Weight: 37kg
 Dimensions: 449(W) x 552(D) x 360(H)mm
 Warranty: 1 Year On-Site (UK Mainland & Ireland)
 1 Year Return to Base (Elsewhere)
N.B. Warranty extendable to 3 years FOC if registered by user

Prices £*

Laser Image Transfer Starter Pack



Everything you need to get started and have resources in reserve. The packs include 2 Teflon sheets and an A-Pad, T-Pad and Sponge Pad for transferring images onto hard materials as well as fabrics.

MP11-LIT-A4	Laser Image Transfer Pack A4. Includes TMT OKI A4 C612N laser printer, A4 pink heat press with 2 PTFE sheets, A-Pad, T-Pad, sponge, heat resistant tape, 100 sheets A4 fabric transfer paper, 100 sheets A4 non-fabric transfer paper.
MP11-LIT-A43WT	Laser Image Transfer Professional Pack A4 (with A3 Deep Swing Press). Includes TMT OKI Pro7411WT white laser printer, 380x500mm deep swing press, 2 PTFE sheets, A-Pad, T-Pad, sponge, heat resistant tape, 50 sheets A4 superior fabric transfer paper, 50 sheets A4 rough non-fabric transfer paper.
MP11-LIT-A3WT	Laser Image Transfer Professional Pack A3. Includes TMT OKI Pro8432 white laser printer, A3+ Deep Heat Press with 2 PTFE sheets, A-Pad, T-Pad, sponge, heat resistant tape, 50 sheets A4 superior fabric transfer paper, 50 sheets A4 rough non-fabric transfer paper.

Heat Presses

For heat presses see pages 122-123.

Materials and Accessories

For our full range of materials and accessories see pages 124 to 128.

Prices £*

*See Pricing Information on page 2

Combined Laser Image Transfer and Sublimation Full Starter Pack



Can't decide whether to go for Laser Image Transfer or Sublimation? Why not look at one of our combined packages which will give you the best of both worlds at little extra cost. In addition to the Laser Image Transfer Starter Pack, there is also an A4 Sublimation printer, mug press with wrap, heat resistant tape and 200 sheets of A4 sublimation paper.

MP11-LITSUB-A4	Combined Laser Image Transfer (LIT) and Sublimation Full Starter Pack. Includes TMT OKI A4 C612N laser printer, Sawgrass Virtuoso SG400 A4 printer, A4 Pink heat press with 2 PTFE sheets, ARC mug press, satin mug wrap, A Pad, T Pad, sponge, heat resistant tape, 200 sheets A4 sublimation paper, 100 sheets LIT A4 fabric transfer paper, 100 sheets LIT A4 non-fabric transfer paper.
-----------------------	---

TMT Laser Printers

LITM-OKIC612N	TMT OKI C612N A4 Laser Printer
LITM-OKIC7411WT	TMT OKI ProC7411WT A4 White Laser Printer
LITM-OKIC8432WT	TMT OKI Pro8432WT A3 White Laser Printer

Image Transfer

Sublimation



Transfer Brilliant, Full Colour Graphics onto Textiles, Mugs and other Sublimation Friendly Items

Sublimation printing is an easy and effective way to introduce industry standard digital printing into the classroom environment. It is best suited to man-made fabrics containing polymer-based fibres, making it perfect for transferring designs to technical textiles or those that are difficult to dye under school conditions. A sublimation printing system offers versatility across the whole department with a wide range of opportunities to customise ready-made garments.



The Technology Explained

Sublimation is when a solid changes into a gas and back to a solid without going through a liquid stage in between. Images for sublimation are printed onto special paper using a purpose-made sublimation printer. At this stage, the ink is a solid layer on top of the paper. This paper is then positioned on the surface to be printed (ink-side-down) within a heat press. The heat and pressure cause the ink to turn into gas which then transfers into the fibres. The gas cools, returns to a solid state, and forms a permanent bond with polymer fibres within the fabric. The result is an extremely durable and light-resistant print which is washable and requires no further finishing. A particular advantage is that Sublimation has little discernable effect on the weight and tactile properties of the fabric. The Sublimation Technology is perfect for incorporating STEM into your lessons!

SubliJet-HD technology from Sawgrass uses gel inks and has transformed the reliability and cost-effectiveness of Sublimation technology for schools. Gel inks do not dry out and clog print heads, they are clean to use and Sawgrass printers are virtually maintenance-free.

What can I do with my Sublimation System?

Sublimation is the ideal system for creating original printed textiles and for applying digital images onto existing textile products including bags, clothing and accessories. TechSoft supply a huge range of sublimation-ready 'blank' items including phone pouches, 'T' shirts, mouse mats, mugs – even flip-flops (see pages 127-128)! Sublimation provides an easy to manage and versatile resource for enterprise and fund-raising projects. Students can quickly produce professional quality products that people will want to buy.

LIT or Sublimation?

The two technologies have a lot in common but there are important differences that might help determine which is right for you. LIT is very versatile – it transfers images onto standard project materials and the LIT printers are fine for everyday paper printing. Sublimation offers brighter, more durable images, but the sublimation printers are not suitable for 'general' printing.

For textile printing, sublimation is by far the preferred option, but for a whole DT department LIT is more versatile. Still can't decide? TechSoft offer a combined package for LIT and Sublimation – see page 119.



A4 Sawgrass Virtuoso SG400 Sublimation Printer



This A4 sublimation printer from Sawgrass provides high quality, vibrant images onto sublimation media. Using new SubliJet-HD technology, the SG400 uses gel-based inks and a special application system to eliminate blockages and prevent drying-up. This is particularly important in schools where machines may not be used for extended periods. Ink cartridges are supplied as sealed units for mess-free changing.

Specifications

Size:	A4
Ink:	SubliJet-HD
Speed:	High Speed: 156/hr @ 600 x 600 dpi High Quality: 72/hr @ 600 x 600 dpi Adv. Photo: 22/hr @ 1200 x 1200 dpi
Resolution:	Up to 3600 x 1200 dpi
Interface:	USB or Ethernet
Weight:	10.5kg
Dimensions:	399(W) x 437(D) x 213(H)mm
Power Requirements:	240V, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

A3 Sawgrass Virtuoso SG800 Sublimation Printer



The Sawgrass Virtuoso SG800 allows both A3 and A4 print options with all the advantages of Sawgrass SubliJet-HD ink technology. Sharp, true colour images are delivered with impressive print speed. An A3 Swing Press will be required to take full advantage of this machine. (Please note that all SubliJet-HD printers are not suitable for general paper printing.)

Specifications

Size:	A3
Ink:	SubliJet-HD
Speed:	High Speed: 156/hr @ 600 x 600 dpi High Quality: 72/hr @ 600 x 600 dpi Adv. Photo: 22/hr @ 1200 x 1200 dpi
Resolution:	Up to 1200 x 1200 dpi
Interface:	USB or Ethernet
Weight:	19.1kg
Dimensions:	540(W) x 552(D) x 259(H)mm
Power Requirements:	240V, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Sublimation Starter Packs

Sublimation Mug Business Starter Pack A4



A great way to produce professional quality, unique and desirable products for fund raising, enterprise or coursework projects. The pack contains the Sawgrass Virtuoso SG400 printer, CMYK ink cartridges, an ARC single mug press, 200 sheets of A4 transfer media & heat resistant tape and 36 sublimation mugs. Everything you need to start your mug business!

Sublimation Textiles Starter Pack A4



Everything you need to set up your textiles sublimation business – all you need is imagination and the products you will customise (and sell?). The pack contains a Sawgrass Virtuoso SG400 printer, CMYK ink cartridges, A4 pink heat press, 200 sheets of A4 transfer media and heat resistant tape.

Prices £*

*See Pricing Information on page 2

Sublimation Mug Business Starter Pack

MP9-SUB-A4M	Sublimation Mug Business Starter Pack Inc Sawgrass Virtuoso SG400 A4 printer with 4 sublimation cartridges, mug press, 36 mugs, 200 sheets A4 sublimation paper, heat resistant tape
--------------------	--

Sublimation Textiles Starter Packs

MP11-SUB-A4T	Sublimation Textiles Starter Pack A4 Inc Sawgrass Virtuoso SG400 A4 printer with 4 sublimation cartridges, A4 pink heat press, 2 Teflon Sheets, 200 sheets A4 sublimation paper, heat resistant tape
MP11-SUB-A3T	Sublimation Textiles Starter Pack A3 Inc Sawgrass Virtuoso SG800 A3 printer with 4 sublimation cartridges, deep swing press (380x500mm), 2 Teflon Sheets, 200 sheets A3 sublimation paper, heat resistant tape

Sublimation Full Starter Packs

MP11-SUB-A4F	Sublimation Full Starter Pack A4 Inc Sawgrass Virtuoso SG400 A4 printer with 4 sublimation cartridges, A4 pink heat press, 2 Teflon Sheets, ARC mug press, 200 sheets A4 sublimation paper, heat resistant tape
MP11-SUB-A3F	Sublimation Full Starter Pack A3 Inc Sawgrass Virtuoso SG800 A3 printer with 4 sublimation cartridges, deep swing press (380x500mm), 2 Teflon Sheets, ARC mug press, 200 sheets A3 sublimation paper, heat resistant tape

Sublimation Printers

SUBM-A4-SG400	Sawgrass Virtuoso SG400 A4 Sublimation Printer with 4 sublimation cartridges (42ml black, 29ml colours)
SUBM-A3-SG800	Sawgrass Virtuoso SG800 A3 Sublimation Printer with 4 sublimation cartridges (75ml black, 68ml colours)

Heat Presses

For heat presses see pages 122-123.

Materials and Accessories

For our full range of materials and accessories see pages 124 to 128.

Image Transfer

Heat Presses

What Can I Use a Heat Press For?

Both LIT (page 118) and Sublimation (page 120) processes require a heat press to transfer images from the transfer media to the item to be printed. Heat presses can also be used for applying heat applied media (pages 44-45). Close control of temperature, pressure and time is needed for high quality, predictable results. All our heat presses feature built-in timers, temperature control and pressure adjustment.

Which Heat Press Should I Choose?

For those on a budget the A4 Pink Press will press most flat items and is also relatively light, making it the most portable of the flat-bed heat presses.

The multi-functional swing press can be used for pressing flat items, and with the addition of the optional attachments, can also be used for caps and plates. However, Laser Image Transfer is demanding in terms of accurate, even pressure so the multi-functional swing press is not suitable for this purpose. It is, however, perfectly O.K. for use with sublimation and heat-applied media.

The heavily engineered A3+ swing presses are for the more demanding user, or simply those requiring to print onto thicker items and/or to transfer metallic foil to fabrics. There are two versions of these swing presses – the standard one and the 'deep' one. The 'deep' one will press flat items up to 25mm thick and so is particularly useful for applying images to thick pieces of wood.

Printed mugs are a popular choice for students running business and enterprise projects. We supply two mug presses, a single and a double. The double one is ideal for faster production. Finally, if you want to press images onto caps, a cap press will be needed. The cap press which we supply can also be used for pockets.

Laser Image Transfer using a white TMT Printer, Rough Surface Transfer (RST) Paper and Deep A3+ Swing Press.



Sublimation for Textiles - Heat Pressed onto Garments

Heat applied, knife cut media



Multi-Functional Swing Press



This multi-functional swing press is ideal for Sublimation and all of TechSoft's heat applied media (see pages 44-45). **It is not, however, recommended for LIT.** The 380 x 300mm platen provides generous accommodation for flat work including 'T' shirts. Add the cap and plate press attachments and you have an economical, versatile machine for a wide variety of Sublimations projects. Easy to use digital controls allow accurate temperature and dwell settings.

Specifications

Display Timer Range:	0 - 9999 sec
Max. Working Temp:	360°C
Weight:	29kg
Dimensions:	1000(W) x 500(D) x 470(H)mm
Working Area Required:	1000(W) x 500(D) x 470(H)mm
Power Requirements:	230V, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £*

*See Pricing Information on page 2

SLM-SWINGPR3830	Multi-Functional Swing Press (380 x 300mm, suitable for sublimation only)	
SLM-SPCAP1	Cap Attachment (150 x 80mm)	
SLM-SPPLATE1	Plate Element Kit (115cm diameter)	

Cap/Pocket Press



Designed for the application of transfers to all types of headwear and small garments, the Studio Cap/Pocket Combo Press features a Digital Controller for the accurate pre-selection of both time and temperature.

Combines a separate cap and two different sized pocket heads that can be interchanged in a matter of seconds, via two thumb screws, with electrical connections on a plug-in lead. This design innovation offers great versatility.



Specifications

Display Timer Range:	0 - 9.59 mins
Maximum Working Temperature:	260°C
Weight:	13.62kg
Dimensions:	320(W) x 460(D) x 435(H)mm (630mm open)
Fuse:	3A
Power Requirements:	230-240V, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £*

*See Pricing Information on page 2

SLM-CAPPRESS2	Cap/Pocket Combi Press	
---------------	------------------------	--

A4 Heat Press



This neat A4 size (300 x 210mm) heat press is simple to use and extremely portable, weighing just 14kg. The gas spring assisted platen provides high, even pressure, making this press ideal for LIT, Sublimation and all of TechSoft's heat applied media (see pages 44-45). Precise time and temperature control is easy to set and monitor using the LCD display and simple interface. Two PTFE sheets are included.

Specifications

Max Platen Size:	300 x 210mm
Weight:	14kg
Dimensions:	310(W) x 574(D) x 330(H)mm
Power Requirements:	230V, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £* *See Pricing Information on page 2

SLM-HPR1	Pink A4 Heat Press (310 x 220mm). Includes 2 x PTFE sheets each 250x190mm.
-----------------	---

Single Mug Press



A durable press designed for sublimation printing onto ceramic mugs. With the additional satin mug wrap it can also be used for LIT. Features digital time and temperature control together with easy loading and unloading. A simple control panel allows for easy adjustment and provides visual 'countdown' and audible 'time-up' beep. The press comes with an element suitable for 11-15oz sized mugs. Further elements are available to suit different size mugs.

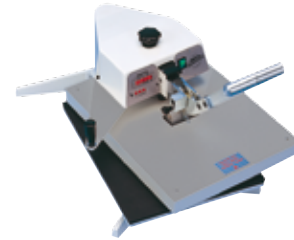
Specifications

Display Timer Range:	0 - 16.66 mins
Max. Working Temp:	260°C
Weight:	6.5kg
Dimensions:	170(W) x 580(D) x 380(H)mm
Working Area:	170(W) x 580(D) x 410(H)mm
Power Requirements:	240V, 280W, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £* *See Pricing Information on page 2

SLM-MUGP2	ARC Single Mug Press c/w 11-15oz element
SLM-MUGWRP1	Mug Wrap Satin 300 x 110 x 2mm, for use with LIT
SLM-ELEMKIT2A	1.5oz Element for ARC Single Mug Press
SLM-ELEMKIT2B	2.5oz Element for ARC Single Mug Press
SLM-ELEMKIT2C	6-10oz Element for ARC Single Mug Press
SLM-ELEMKIT2D	12oz Latte Element for ARC Single Mug Press
SLM-ELEMKIT2E	17oz Latte Element for ARC Single Mug Press

A3+ Swing Press



These professional A3+ size (380 x 500mm) swing presses have heavily engineered components to ensure high, even pressure across the platen. Precise time and temperature control is easy to set and monitor using the LCD display and simple interface. The deep version presses items up to 25mm thick. Suitable for LIT, Sublimation and all of TechSoft's heat applied media (see pages 44-45).

Specifications

Max Platen Size:	380 x 500mm
Weight:	45kg
Dimensions:	620(W) x 910(D) x 420(H)mm
Power Requirements:	230-240V, 2.5kW, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £* *See Pricing Information on page 2

SLM-SWINGPRESS	A3+ Swing Press (380 x 500mm)
SLM-SWINGPR2	Deep A3+ Swing Press (380 x 500mm, presses items up to 25mm thick)
SLM-SPBASE4	150 x 150mm Interchangeable Press Platen Base for SLM-SWINGPRESS/SWINGPR2
SLM-SPBASE2	200 x 200mm Interchangeable Press Platen Base for SLM-SWINGPRESS/SWINGPR2
SLM-SPBASE1	250 x 250mm Interchangeable Press Platen Base for SLM-SWINGPRESS/SWINGPR2
SLM-SPBASE3	300 x 300mm Interchangeable Press Platen Base for SLM-SWINGPRESS/SWINGPR2

Double Mug Press



The Twin Head Mug Press enables you to press sublimation transfers onto sublimation mugs. The heating elements are interchangeable with smaller porcelain elements (available separately) which allows you to also press our sublimation porcelain mugs and sublimation water bottles. This double mug press features twin independent digital electronic timers and temperature control. Consistent and accurate heat control is achieved.

Specifications

Display Timer Range:	0 - 9999 Sec
Max. Working Temp:	260°C
Weight:	13.5kg
Fuse:	3A
Dimensions:	350(W) x 430(D) x 335(H)mm (370mm open)
Power Requirements:	230V, 560W, 13A Socket
Warranty:	1 Year Return to Base (UK Mainland & Ireland) 1 Year Return and Collect (Elsewhere)

Prices £* *See Pricing Information on page 2

SLM-MUGP3	Adkins Double Mug Press c/w 2 x 11oz elements
SUBA-ELEMKITAD22L	6oz Element Kit (left hand)
SUBA-ELEMKITAD22R	6oz Element Kit (right hand)
SUBA-ELEMKITAD21L	Replacement 11oz Element Kit (left hand)
SUBA-ELEMKITAD21R	Replacement 11oz Element Kit (right hand)

Image Transfer

Materials

LIT for Light Colour Fabric



Mouse Mat



100% Cotton T-shirt

Transfer printed graphics onto white or light coloured fabrics and textiles, including T-shirts, polo-shirts, mouse mats, canvas, etc.

Standard Transfer Paper

For TMT OKI C612N, C7411WT, C610N, C5750N, C5600N

LIT-TTC31-A4R	100 A4 sheets transfer paper for white or pastel coloured fabric	
---------------	--	--

For TMT OKI C8432WT, C831N, C821N, MC860DN, C8800N & Epson AcuLaser C8600

LIT-TTC31-A4	100 A4 sheets transfer paper for white or pastel coloured fabric	
--------------	--	--

LIT-TTC31-A3	100 A3 sheets transfer paper for white or pastel coloured fabric	
--------------	--	--

For TMT Konika Minolta 5430DL

LIT-TTC33-A4R	100 A4 sheets transfer paper for white or pastel coloured fabric	
---------------	--	--

Professional Transfer Paper

For use with TMT/OKI White-Toner Printers only. The T.One™ transfer paper is a 'one-step' solution that involves no cutting, weeding and more importantly leaves no residue on the finished garment or textile.



The printed transfer is then sealed using the silicon T.Seal sheet for outstanding wash durability and great feel.

LIT-T1-A4	50 A4 sheets T.One transfer paper. <i>N.B. Can only be used with SLM-SWINGPRESS or SML-SWINGPR2</i>	
-----------	---	--

LIT-T1-A3	50 A3 sheets T.One transfer paper. <i>N.B. Can only be used with SLM-SWINGPRESS or SML-SWINGPR2</i>	
-----------	---	--

Accessories

PTFE (Teflon) sheets provide added protection to the heated upper platen on a heat press when used with fabrics.

LIT-TEFLON	PTFE sheet for use with fabrics, etc (380 x 500mm)	
------------	--	--

T.Seal sheets are used to seal the transfer when using T.One transfer paper.

LIT-TSEALA4	T.Seal A4. <i>For use with T.One transfer paper.</i>	
-------------	--	--

LIT-TSEALA3	T.Seal A3. <i>For use with T.One transfer paper.</i>	
-------------	--	--

LIT for Dark Colour Fabric



Transfer printed graphics onto dark coloured fabrics and textiles.

Standard Transfer Media

Once printed onto, the media is peeled off to reveal your image on a white background layer. This is then heat pressed onto your textiles or garment leaving a vibrant white background. You can remove this background before transfer by using our Knife Cutting machines (see page 32) to cut away the excess white around the images.

TAVIP-L3-50	50 A3 sheets heat applied printable media	
TAVIP-L3-25	25 A3 sheets heat applied printable media	
TAVIP-L3-10	10 A3 sheets heat applied printable media	
TAVIP-L4-50	50 A4 sheets heat applied printable media	
TAVIP-L4-25	25 A4 sheets heat applied printable media	
TAVIP-L4-10	10 A4 sheets heat applied printable media	

Professional Transfer Paper



For CMYK Colour Laser Printers

LIT-WOW-A4	50 A4 WoW 7.2 transfer paper for dark coloured fabrics	
------------	--	--

For TMT/OKI White-Toner Printers only

LIT-WOW78-A4	50 A4 WoW 7.8 transfer paper for dark coloured fabrics	
--------------	--	--

Accessories

PTFE (Teflon) sheets provide added protection to the heated upper platen on a heat press when used with fabrics.

LIT-TEFLON	PTFE sheet for use with fabrics, etc (380 x 500mm)	
------------	--	--

The T.Pad is used as an application pad when using the WoW 7.2 and WoW 7.8 transfer papers.

LIT-TPAD	T.Pad (380 x 500mm). <i>Includes 2 x T.Seal sheets (A3 and A4) and 2 x polyamide heat protection gloves.</i>	
----------	--	--

T.Seal sheets are used to seal the transfer when using WoW 7.8 transfer paper.

LIT-TSEALA4	T.Seal A4. <i>For use with WoW 7.8 transfer paper.</i>	
-------------	--	--

LIT-TSEALA3	T.Seal A3. <i>For use with WoW 7.8 transfer paper.</i>	
-------------	--	--

LIT for Non-Fabrics



Acrylic Award



Plywood Puzzle

Transfer printed graphics onto white or light coloured non-fabric materials, such as plastic, metal, ceramic, wood, leather etc.

N.B. Some materials require the use of an application pad (see Accessories below).

LIT for Smooth Surface Non-Fabrics

For TMT OKI C612N, C7411WT, C610N, C5750N, C5600N

LIT-CPM62-A4R	100 A4 sheets 110gsm transfer paper for smooth surface white or light coloured non-fabric materials	
----------------------	---	--

For TMT OKI C8432WT, C831N, C821N, MC860DN, C8800N & Epson AcuLaser C8600

LIT-CPM62-A4	100 A4 sheets 110gsm transfer paper for smooth surface white or light coloured non-fabric materials	
LIT-CPM62-A3	100 A3 sheets 110gsm transfer paper for smooth surface white or light coloured non-fabric materials	

For TMT Konkia Minolta 5430DL

LIT-CPM64-A4R	100 A4 sheets 95gsm transfer paper for smooth surface white or light coloured non-fabric materials	
----------------------	--	--

LIT for Rough Surface Non-Fabrics

Rough surface transfer paper is ideal for more rough and soft surfaces such as untreated wood, cork and the like which smooth surface transfer paper tends to stick to.



LIT-RST-A4	50 A4 sheets transfer paper for rough surface white or light coloured non-fabric materials	
LIT-RST-A3	50 A3 sheets transfer paper for rough surface white or light coloured non-fabric materials	

Required Accessories

Application Pads

Application pads are used in conjunction with a heat press when transferring LIT graphics to different non-fabric substrates.

LIT-APAD	A-Pad silicone rubber for specific smooth surface applications such as metal, plastic, vinyl, board, CD's etc.	
LIT-TPAD	T.Pad (380 x 500mm). Includes 2 x T.Seal sheets (A3 and A4) and 2 x polyamide heat protection gloves.	

Coverseal

Coverseal is a transparent film that provides maximum UV protection and maximum scratch resistance to transferred images on non-fabric surfaces. It is applied using a heat press in conjunction with the sponge pad.

LIT-COV10-A3	10 A3 Coverseal sheets with sponge pad	
LIT-COV50-A3	50 A3 Coverseal sheets with sponge pad	
LIT-SPONGE	Sponge pad for coverseal	

Sublimation Transfer Paper



SUB-P200-A4	200 A4 Sheets Sublimation Paper	
SUB-P100-A3	100 A3 Sheets Sublimation Paper	

Heat Tape (for LIT & Sublimation)



Heat tape is used when you need to fix the transfer paper in place before transferring the image on the heat press. It is essential when transferring images onto mugs using the mug press, and is also useful with CAD/CAM applications.

SL-HEATTAPE	Heat resistant tape	
--------------------	---------------------	--

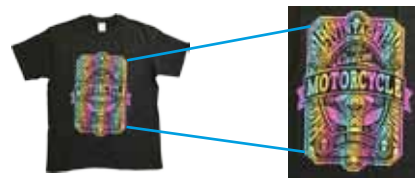
Metallic Foil for Fabrics (T.Foil)



For use with TMT/OKI White-Toner Printers only

Metallic Effect textiles and garments are now possible with no cutting or weeding required. Using T.One transfer paper to deliver a base transfer layer, T.Foil can then be applied to create a stunning foil effect.

Please note: a sheet of T.Seal is required for each colour T.Foil you intend to process - to avoid cross contamination of colours.



LIT-TFOIL-COL	Metallic Roll of T.Foil. 25m x 300mm. Available in Gold, Silver or Rainbow	
----------------------	--	--

Accessories

LIT-T1-A4	50 A4 sheets T.One transfer paper. <i>N.B. Can only be used with SLM-SWINGPRESS or SLM-SWINGPR2</i>	
LIT-T1-A3	50 A3 sheets T.One transfer paper. <i>N.B. Can only be used with SLM-SWINGPRESS or SLM-SWINGPR2</i>	
LIT-TSEALA4	T.Seal A4. For use with T.Foil.	
LIT-TSEALA3	T.Seal A3. For use with T.Foil.	

Image Transfer

LIT Products & Materials

Products & Materials Ready for LIT



These products are ready to have images transferred onto them using the Laser Image Transfer process. *N.B. Not suitable for Sublimation.*

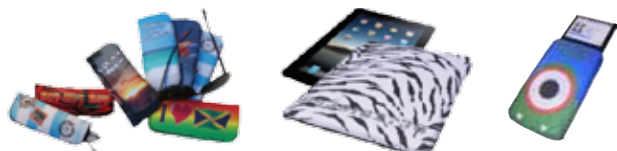
Laser Image Transfer Mugs



LIT-MUG36	36 Ceramic Coated Mugs 11oz (Dishwasher safe, for use with Mug Press)	
------------------	--	--

Soft Rubber Cases, Covers and Pouches

These products are made from a 3.5mm thick black rubber compound which offers great protection and they have a white jersey surface which can be personalised using sublimation or LIT.



SL-GLS10	10 Small Glasses Pouches (60 x 155mm)	
SL-GLL10	10 Large Glasses Pouches (75 x 160mm)	
SL-NETB	Netbook Cover (270 x 190mm)	
SL-IPAD	iPad Cover (255 x 190mm)	
SL-MP3L10	10 Large iPhone/iPod/MP3 Cases (78 x 130mm)	

Bags



SL-BG1-COL	Gym Bag 450 x 340mm (available in 31 colours please state when ordering)	
-------------------	--	--

Jigsaws



LIT-JIG40	LIT Jigsaw Puzzle (40 pieces) 270 x 190mm Ultra fine weave linen laminated on 2mm board.	
------------------	---	--

Display Board

LIT-BRD10-A4	10 A4 shts display board (2500 micron, inc struts)	
LIT-BRD10-A3	10 A3 shts display board (2500 micron, inc struts)	

Mouse Mats



SL-MAT10-WF	10 Mouse Mats (250 x 190 x 6mm) White fabric surface with black rubber base	
SL-MAT10-RWF	10 Round Mouse Mats (190mm dia, x 6mm) White fabric surface with black rubber base	

Coasters & Placemats



SL-CSF25	25 Coasters with a fabric surface and rubber base (90 x 90 x 6mm).	
SL-PMF	Place Mat with fabric surface and rubber base (380 x 260 x 3mm).	

Mini T-shirts



LIT-MT50-W	50 White Mini T-shirts	
LIT-MT50-HANGER	50 Mini T Hangers (for use with LIT-MT50-W)	

T-Shirts For details see page 117.

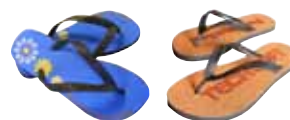
CL-TS1-1-COL-SZ	T-Shirt, 100% cotton. (Child Ages 1/2 - 12/13, Chest 24" - 34", available in 15 colours - please state when ordering)	
CL-TS1-2-COL-SZ	T-Shirt, 100% cotton. (Adult Sizes S-3XL, Chest 35" - 52", available in 24 colours - please state when ordering)	

White Baseball Caps



LIT-CAP10-WH	10 White Baseball Caps (100% fine cotton twill with curved peak & velcro back)	
---------------------	--	--

Flip Flops



SL-FLIPK10	10 Pairs Kids Flip Flops (Small 17cm, Medium 19cm, or Large 22cm)	
SL-FLIPA10	10 Pairs Adults Flip Flops (Small size 4-6, Medium size 7-9 or Large size 10-12)	
SL-FLIPTOOL	Flip Flop Tool (to attach straps)	

Teddy Bear with White T-Shirt



LIT-BEAR10	10" Teddy Bear with one white shirt	
LIT-BEAR10-S	Spare white shirt for LIT-BEAR10 (100% cotton)	

Products Ready for Sublimation



Sublimation Mugs

These mugs are specifically manufactured for sublimation printing and have the award winning "Orca" coating as standard, giving the ultimate in durability and vibrant colour.



SUB-MUGP-36	36 Coated Polyester Mugs 11 oz (92mm tall, 80mm diameter)	
SUB-MUGC-36	36 Bone China Mugs 10oz (100mm tall, 65mm diameter)	
SUB-MUGS-48	48 Smug Mugs 6oz (73mm tall, 70mm diameter)	
SUBA-ELEMKIT	6oz Element Kit for Single Mug Press (needed for smug and bone china mugs)	

Money Boxes

These ceramic money boxes have a slot in the top and a bung underneath to remove the money. Dimensions 80mm diameter x 95mm height.



SUB-MB-6	6 Ceramic Sublimation Money Boxes	
-----------------	-----------------------------------	--

Water Bottles

These water bottles are ideal for children to take with them to school. They also fit into cycle water bottle holders and are great for sports. They are supplied with mouthpiece and 2 cap fixings. Dimensions 70mm diameter x 160mm height to neck, 198mm height with lid.



N.B. Print using 6oz element kit for Single Mug Press

SUB-BOT2-S	600ml Water Bottle with Silver Finish	
SUB-BOT2-W	600ml Water Bottle with White Finish	
SUBA-ELEMKIT	6oz Element Kit for Single Mug Press	

Soft Rubber Cases, Covers and Pouches

These products are made from a 3.5mm thick black rubber compound which offers great protection and they have a white jersey surface which can be personalised using sublimation or LIT.



SL-GLS10	10 Small Glasses Pouches (60 x 155mm)	
SL-GLL10	10 Large Glasses Pouches (75 x 160mm)	
SL-NETB	Netbook Cover (270 x 190mm)	
SL-IPAD	iPad Cover (255 x 190mm)	
SL-MP3L10	10 Large iPhone/iPod/MP3 Cases (78 x 130mm)	

Leather Cases

Leather cases for phones. Magnetic fastening and inside out slots for credit cards. Made from durable faux leather PU with printable white polyester surface.



SUB-PHONE1-2	Leather Case for iPhone 5/5S	
SUB-PHONE1-4	Leather Case for Samsung S4	

Bags



SL-BG1-WH	White Gym Bag (450 x 340mm)	
------------------	-----------------------------	--

Back Packs

These children's backpacks comprise of two zipped compartments - one large section and a smaller front pocket. In addition they have two mesh pockets on either side. The straps are padded and adjustable.



SUB-BP1-COL	Child's Back Pack (available in red or blue). Please state colour required when ordering.	
--------------------	---	--

Bookmarks

These bookmarks are made from 0.5mm thick aluminium with rounded edges. They produce a high gloss finish. Dimensions 130 x 35mm.



SUB-BM1-10	Pack of 10 Metal Bookmarks. 35 x 130 x 0.5mm. Aluminium.	
-------------------	--	--

Clocks

The glass clocks produce lovely gloss and contemporary finish. Square or round aluminium clocks also available.



SUB-CLCK3	Glass Clock, 200mm diameter.	
SUB-CLCK4R	Aluminium Round Clock, 198mm diameter.	
SUB-CLCK4T	Aluminium Rectangular Clock, 140 x 255mm.	
SUB-ENDFAB1	HD Endura Fabric 1680 x 1000mm. Used to absorb moisture when pressing onto Metal.	

Jigsaws



SUB-JIG30	Sublimation Jigsaw Puzzle (30 pieces) 250 x 175mm medite (MDF) board	
SUB-JIG60	Sublimation Jigsaw Puzzle (60 pieces) 360 x 250mm medite (MDF) board	

Image Transfer

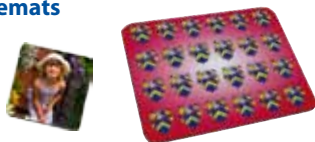
Sublimation Products & Materials Plus Printer Consumables

Mouse Mats



SL-MAT10-WF	10 Mouse Mats (250 x 190 x 6mm) White fabric surface with black rubber base	
SL-MAT10-RWF	10 Round Mouse Mats (190mm dia, x 6mm) White fabric surface with black rubber base	

Coasters & Placemats



SUB-CS25	25 Square Coasters (95 x 95 x 4mm). Glossy finish with cork base.	
SUB-CSM10	10 Aluminium Metal Coasters (100 x 100mm).	
SUB-PM10	10 Place Mats (250 x 190 x 5mm). Glossy finish with cork base.	

Caps *For details see page 117.*

SUB-CAP-COL	Polyester Cap (<i>available in 30 colours please state when ordering</i>)	
--------------------	---	--

T-Shirts *For details see page 117.*

SUB-TS1-1-WH	White T-Shirt, 100% polyester. (<i>Child Ages 3/4 - 12/13, XS-XL please state when ordering</i>)	
SUB-TS1-2-WH	White T-Shirt, 100% polyester. (<i>Adult Sizes XS-XL, 35" - 50" chest please state when ordering</i>)	

Polo Shirts *For details see page 116.*

SUB-PS1-2-WH	White Polo Shirt, 100% polyester. (<i>Adult Sizes XS-XXL, 35" - 50" chest please state when ordering</i>)	
---------------------	---	--

Flip Flops



SL-FLIPK10	10 Pairs Kids Flip Flops (<i>Small 17cm, Medium 19cm, or Large 22cm</i>)	
SL-FLIPA10	10 Pairs Adults Flip Flops (<i>Small size 4-6, Medium size 7-9 or Large size 10-12</i>)	
SL-FLIPTOOL	Flip Flop Tool (<i>to attach straps</i>)	

Baby Items

These large bibs are made of a microfibre material which is not only soft but very absorbent. They are machine washable and the image will not fade over time.



SL-BIB-COL	Baby bib. Coloured trim available in pink, blue or white. <i>Please specify colour when ordering.</i>	
-------------------	---	--

Teddy Bear with White T-Shirt



SUB-BEAR10	10" Teddy Bear with one white T-Shirt	
SUB-BEAR10-S	Spare white sublimation shirt for SUB-BEAR10	

LIT Printer Consumables



TMT OKI C612N A4

LITA-C612N-B	Black Toner Cartridge	
LITA-C612N-CMY*	Toner Cartridge	
LITA-C612ND-B	Black Imaging Drum	
LITA-C612ND-CMY*	Imaging Drum	
LITA-C612N-TBU	Transfer Belt Unit	
LITA-C612N-FU	Fuser Unit	

TMT OKI C610N A4

LITA-C610N-B	Black Toner Cartridge	
LITA-C610N-CMY*	Toner Cartridge	
LITA-C610ND-B	Black Imaging Drum	
LITA-C610ND-CMY*	Imaging Drum	
LITA-C610N-TBU	Transfer Belt Unit	
LITA-C610N-FU	Fuser Unit	

TMT OKI C7411WT A4 WHITE

LITA-C7411WT-W	White Toner	
LITA-C7411WT-CMY*	Toner Cartridge	
LITA-C7411WTD-W	White Imaging Drum	
LITA-C7411WTD-CMY*	Imaging Drum	
LITA-C7411WT-TBU	Transfer Belt Unit	
LITA-C7411WT-FU	Fuser Unit	

TMT OKI C8432WT A4 WHITE

LITA-C8432WT-W	White Toner	
LITA-C8432WT-CMY*	Toner Cartridge	
LITA-C8432WTD-W	White Imaging Drum	
LITA-C8432WTD-CMY*	Imaging Drum	
LITA-C8432WT-TBU	Transfer Belt Unit	
LITA-C8432WT-FU	Fuser Unit	

For TMT OKI C711WT, 5750N, 831N, 821N, MC860D/DTN/DTX, C5600N, C8800N, Konika Minolta 5430DL & Epson Aculaser C8600 see www.techsoft.co.uk/Products/ImageTransferLITMaterials/LITPrinterConsumables.

Sublimation Printer Consumables



For Sawgrass Virtuoso SG800

SUBA-SG800-B	Black Ink Cartridge 75ml	
SUBA-SG800-CMY*	Colour Ink Cartridge 68ml	
SUBA-SG800-IC	Ink Collection Unit for Sawgrass SG800	

For Sawgrass Virtuoso SG400 (*or low capacity inks for SG800*)

SUBA-SG400-B	Black Ink Cartridge 42ml	
SUBA-SG400-CMY*	Colour Ink Cartridge 29ml	
SUBA-SG400-IC	Ink Collection Unit for Sawgrass SG400	

For Ricoh SG7100DN

SUBA-SG7100-B	Black Ink Cartridge 68ml	
SUBA-SG7100-CMY*	Colour Ink Cartridge 60ml	
SUBA-SG3110-IC	Ink Collection Unit for Ricoh SG3110DN/SG7100DN/SG7100	

For Ricoh SG3110DN (*or low capacity inks for SG7100DN*)

SUBA-SG3110-B	Black Ink Cartridge 42ml	
SUBA-SG3110-CMY*	Colour Ink Cartridge 29ml	
SUBA-SG3110-IC	Ink Collection Unit for Ricoh SG3110DN/SG7100DN/SG7100	

For Ricoh GX7700, GXe3300N & GX7000 see www.techsoft.co.uk/Products/ImageTransferSublimationMaterials/SublimationPrinterConsumables

**When ordering, where CMY is included in the order code, please change this to specify whether cyan, magenta or yellow is required.*



Unique Photo Impact Printing System for Metals and Hard Plastics

METAZA in Education

METAZA transfers subtle graduations and fine details onto smooth, flat, metal and acrylic surfaces. Surfaces need to be finished but not necessarily polished – a satin finish can give equally rewarding results. This exciting tool is particularly effective for embellishing jewellery projects, where the unique and fascinating impression created is sophisticated and quite unlike anything else to be seen in student project work. More widely, METAZA is great for personalising and transforming all sorts of projects including phone charms, luggage tags, ID tags, awards, plaques, and badges. METAZA is an ideal resource for mini-enterprise activities - it is simple to use and adds significant value to quite mundane objects. On a more utilitarian note, the unique nature of a METAZA image makes it an ideal tool for permanent security marking.

Unique Technology

The remarkable METAZA MPX-95 is like no other machine for creating permanent images onto hard materials.

Rather than etching, engraving or printing onto the material surface, METAZA uses innovative dot impact technology to create thousands of tiny facets that reflect light and produce an extraordinarily detailed 3D-effect. Images are almost holographic, impossible to produce by other means and because they are 'in' and not 'on' the surface, they are permanent. Because the technique does not cut the surface in any way, it is particularly suitable for plated metals where conventional engraving would break through to the base metal.

Designing for METAZA

2D Design is the ideal tool to generate original designs for METAZA and you could, of course, include photographs, text, patterns and shapes in your design. The design is then imported into METAZAStudio software which is used to 'size' the design to suit the machine and workpiece. Image controls let you adjust contrast and brightness which, in effect, are adjusting the depth and density of the facets which will impress into the surface. METAZAStudio software is supplied with the machine and includes basic tools for adding shapes and text, and for cropping or clipping images. If original design is not a priority, you could even import clipart or digital photographs directly into METAZAStudio.

Machine Set-Up

Output from METAZAStudio couldn't be easier. Accurate previews give confidence about the outcome and 'printing' is completely safe (no dust or sharp cutters to worry about) - and remarkably swift. The workpiece is simply slotted or clamped onto the machine bed and a typical pendant design is likely to be finished in only a few minutes.

METAZA could well find a home in a creative and enterprising Design and Technology department.

Specification

Max. printing area:	80(W) x 80(D) x 70(H)mm
Max. object size:	100(W) x 200(D) x 40(H)mm
Printing stylus:	Diamond Tip
Print resolution (dpi):	529(High), 353(Photo), 265(Text), 1058(Vector)
Interface:	USB
Weight:	12kg
Dimensions:	286(W)x383(D)x308(H)mm



What's Included

- Metaza Studio Software

Warranty

UK Mainland & Ireland: 1 Year Return to Base
Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

RL-METAZA-MPX95	Roland Metaza MPX-95	
-----------------	----------------------	--

Fine Silver Jewellery

Precious Metal Clay



Metal Clay is a new and unique material suitable for both GCSE and A Level Design & Technology, and Art courses.

Precious Metal Clay - Silver

Precious Metal Clay (PMC) is a modern material and already revolutionising what jewellers and designers can create in solid silver without the need for casting equipment. Despite its name, Precious Metal Clay is not 'clay' at all, but a paste made from fine ground particles of pure silver, organic binder and water. It works like traditional clay so can be moulded and sculpted in the usual way, or reduced with water into a 'slip' consistency for joining PMC pieces together, or filling small cracks.

The 'magic' happens when the design is fired. The water evaporates and the organic binder burns away leaving a 99% pure solid silver piece. As such, it can be hallmarked as Fine Silver and (if needs be) can be silver-soldered. Care needs to be taken with any heat process like this, but the materials themselves are non-toxic.

For small projects, firing can be done with a torch and only takes a couple of minutes. Larger pieces should be kiln fired for even heating.

TechSoft are delighted to offer not only the PMC3 silver clay, but also the new PMC Flex silver clay which has an even longer working time in its 'clay' state – ideal for student work. Both types can be fired with either a torch or a kiln.

Once fired PMC appears white (the natural colour for silver) and must be polished. A stainless-steel brush will achieve a fine matt finish which can then be worked into a high lustre using a burnisher or polishing mop. Even easier is to polish by tumbling in a barrel polisher/tumbler with water, a little soap and some stainless steel shot. This technique has the added advantage of work-hardening the silver to strengthen it – important for delicate items such as rings.

Creative Metal Clay – Bronze and Copper

Creative Metal Clay (CMC) is similar to PMC but contains bronze or copper instead of silver. As such, it is a cheaper alternative – ideal for school use where budgets may be tight.

Use in Education

TechSoft are always looking for new and innovative products to help students get even more benefit from our CAD/CAM resources. These metal clays provide an excellent opportunity for creating 'clever' projects of high-value using laser-cut or milled 2D moulds. 3D moulds can be created using even our smallest CNC milling machine and softer materials such as modelling wax (see page 91) makes an ideal mould-material. Projects are likely to be small so costs can be controlled and throughput can be manageable for individual or groups of students. By using CAD/CAM for mould making, designs can be thoroughly checked in CAD and any number of moulds can be made using small amounts of cheaper material before committing to the metal clay. Metal clay is an excellent material for free-hand modelling but the use of moulds allows for tighter control and limits the chance for wastage.



The chosen design is created in 2D Design, SolidWorks or taken from a 3D scanned image. Any TechSoft/Roland CNC mill is then used to produce a mould or pattern. In this case a pattern is being milled from machining wax.



A flexible mould is produced from the pattern by hand-forming moulding compound around it. The compound sets quickly making for uninterrupted progress.



PMC3 is pressed into the mould, allowed to dry, carefully removed, and then thoroughly dried in a warm place before torch or kiln firing. This model has simply been brush-finished and awaits burnishing and polishing.

Prices £*

*See Pricing Information on page 2

Starter Kits

PMC-KITSTARTB	Precious Metal Clay Basic Starter Kit (inc. PMC3 6.3g, Badger Balm (release agent), Paintbrush, PMC Workmat with sizing scales, Teflon sheet, Bits & Bobs Mould H1, Sandpaper, Basic Hand Drill, 2 Jump Rings, Necklace cord, Kiln firing voucher, Instructions)
PMC-KITSTARTP	Precious Metal Clay Super Starter Kit (inc. PMC3 9kg, Badger Balm (release agent), Tweezers, 2 1.5 Spacers, Roller, Claychaper, Paintbrush, Workmat with PMC sizing, Teflon sheet, Sandpaper, Rubber Block, Stainless Steel Brush, Torch, Torch Block, Metal Burnisher, Circle Cutter, Jump Rings, Necklace Cord, Mini Texture Mat, 3 Fire Proof Gemstones, Instructions)

Handprinting Equipment

PMC-KITHF1	Hand and Foot Printing Kit (inc. inkless wipe and 2 handprinting sheets - refill for PMC-KITH)
PMC-KITPHOTO	Photopolymer Kit exc. Lamp (Contains 2 photopolymer plates each 100x80mm, backing board, foam and glass, soft scrubbing brush and full instructions.)
PMC-KITPHOTO2	Photopolymer Kit with Lamp (Contains 2 photopolymer plates each 100x80mm, backing board, foam and glass, soft scrubbing brush and full instructions.)
PMC-REFILPHOTO	Photopolymer Refill (2 off 100x80mm plates)

Support Materials

PMC-MC-100	Moulding Compound 100g (2 x 50g)
PMC-MC-300	Moulding Compound 300g (2 x 150g)
PMC-BALMBADG	Badger Balm - Natural Scent (0.75oz)

Bronze Clay

PMC-CLB-50	Creative Bronze Clay (50g)
PMC-CLB-100	Creative Bronze Clay (100g)
PMC-CLB-200	Creative Bronze Clay (200g)
PMC-SYRINB10	Creative Bronze Clay Syringe 10g

Creative Copper Clay

PMC-CLC-50	Creative Copper Clay (50g)
PMC-CLC-100	Creative Copper Clay (100g)
PMC-CLC-200	Creative Copper Clay (200g)
PMC-SYRINC10	Creative Copper Clay Syringe 10g

Silver Clay

PMC Flex - NEW, Ideal for schools with its longer working time

PMC-CLF-5	Silver Clay, PMC Flex (5g Silver)
PMC-CLF-15	Silver Clay, PMC Flex (15g Silver)
PMC-CLF-30	Silver Clay, PMC Flex (30g Silver)
PMC-CLF-60	Silver Clay, PMC Flex (60g Silver)

PMC3

PMC-CL3-6	Silver Clay, PMC3 (6.3g Silver)
PMC-CL3-9	Silver Clay, PMC3 (9g Silver)
PMC-CL3-16	Silver Clay, PMC3 (16g Silver)
PMC-CL3-25	Silver Clay, PMC3 (25g Silver)
PMC-CL3-50	Silver Clay, PMC3 (50g Silver)
PMC-PASTE	Silver Clay, PMC3 Paste

Cutters and Moulds

PMC-CUTDIA6	Pk of 6 Diamond Cutters
PMC-CUTHRT6	Pk of 6 Heart Cutters
PMC-CUTOV6	Pk of 6 Oval Cutters
PMC-CUTSQ6	Pk of 6 Square Cutters
PMC-CUTRT6	Pk of 6 Rectangular Cutters
PMC-PLATEBR4	4 Brass Plates (chips, beech, pebble and wave)
PMC-MOULDBB3	3 Bits 'n' Bobs Moulds
PMC-MOULDS5	Seashore Mould
PMC-MOULDORC	Orchid Mould

Accessories

PMC-TORCHSI	Torch - Self Ignition & Lock
PMC-TORCHBL	Torch Block
PMC-BRUSHSSW	Stainless Steel Wire Brush - Std Bristle
PMC-BRUSHBRL	Brass Brush (long bristle)
PMC-PICKLEAN1	150g Picklean (for removing firescale from metals such as copper, bronze and silver)
PMC-SANDP5	Sandpaper (Pack of 5)
PMC-MATRUB6	6 Rubber Mats - Square
PMC-TOOLC	Clean up / Carving Tool
PMC-TOOLWIP2	Clay Shaper
PMC-BURNMET	Metal Burnisher
PMC-KITTUMB	Tumbler Kit (includes Mixed Stainless Steel Shot & Tumbler Soap)
PMC-SYRIN	Syringe
PMC-SHEETSQ	PMC+ sheet (square)
PMC-SPROLL	Spacer & Roller Set
PMC-MAT	Work Mat
PMC-SHEETTEF5	Pk of 5 Telfon Sheets
PMC-BRUSHPNT2	Set of 2 Paint Brushes
PMC-DRILLH	Hand Drill Set
PMC-DISP1	Olive Oil Dispenser

Pottery Equipment

Pugmills

Horizontal Pugmill



A robust pugmill is an essential tool to prepare and re-cycle partly-dried clay. This entry level machine will be ideal for schools and colleges where clay work is an occasional activity within general Art and Design teaching. Scrap and waste clay is manually fed into the hopper

which features a safety grid to protect the operator. The machine has thermal overload protection and is available in single or 3-phase power options. Although entry level, this machine is heavily-engineered for long life and will need securing to a strong bench or stand. The main aluminium body castings split for easy cleaning.

Specification	
Body:	100mm aluminium
Extrusion:	50mm
Output:	190-200kg per hour (approx)
Motor:	0.37kW (0.5hp)
Weight:	36.5kg
Dimensions:	280(W) x 800(D) x 470(H)mm
Power Requirements:	415V 0.37kW or 240V 0.37kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-PUGMILL2S	Horizontal Pugmill G49E (1 phase)		
AR-PUGMILL2T	Horizontal Pugmill G49E (3 phase)		
AR-PUGSTAND2	Stand for AR-PUGMILL2 / AR-PUGMILL5		

Power Feed Horizontal Pugmill



This mid-range pugmill has the power and capacity needed to support a dedicated pottery facility in most schools and colleges. The machine has the same rugged build-quality as the vertical model, but has a number of features to make clay preparation virtually effortless. The powered-feed system eliminates the need for a feed handle and plunger which promotes

more continuous working and demands far less strength and effort from the user. During loading the drive is isolated via an interlocked loading lid, preventing contact with the feed rollers whilst in use. The pugmill is fitted with a hopper safety grid and thermal overload safety switch as standard. Alloy blades and a geared reduction drive support the quality engineering featured in this well-designed machine.

Specification	
Body:	150mm aluminium
Extrusion:	75mm
Output:	300kg per hour (approx)
Motor:	0.75kW (1hp)
Weight:	90Kg
Dimensions:	1300(W) x 230(D) x 460(H)mm
Power Requirements:	415V 0.75kW or 240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-PUGMILL5S	Power Feed Horizontal Pugmill G52P (1 phase)		
AR-PUGMILL5T	Power Feed Horizontal Pugmill G52P (3 phase)		
AR-PUGSTAND2	Stand for AR-PUGMILL2 / AR-PUGMILL5		

Vertical Pugmill



This vertical pugmill will suit users needing to routinely re-cycle and prepare larger quantities of clay. In addition to greater power and capacity than the standard horizontal pugmill, this machine is supplied with a sturdy stand that, once bolted to the floor, means the machine has a compact 600mm x 600mm footprint – a great advantage where space is limited. Clay is manually fed into the hopper and thermal overload switching prevents damage to the motor should operators become over-enthusiastic. The machine is strongly-engineered and features high torque reduction gearing, alloy blades and a split main body for cleaning.

Specification	
Body:	150mm aluminium
Extrusion:	75mm
Output:	360kg per hour
Motor:	0.75kW (1hp)
Weight:	123kg
Dimensions:	609(W) x 711(D) x 1980(H)mm
Power Requirements:	415V 0.75kW or 240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-PUGMILL4S	Vertical Pugmill G53 (1 phase)		
AR-PUGMILL4T	Vertical Pugmill G53 (3 phase)		

Wall Extruder



This robust and compact wall-mounted extruder has been designed to give a lifetime of reliable service and requires very little maintenance. An extruder is an indispensable tool to produce small solid sections such as cup handles or coils for pot making. Optional additional dies add to the versatility of this machine and enable hollow-section parts to be extruded.

The extruder's main aluminium body houses a series of hooks to allow the handle to be mounted where it will apply maximum leverage to the plunger. The wall extruder is supplied complete with a blank die plate and all the fixtures needed to mount it to a suitable wall. The handle can be easily removed for safe storage when not in use.

Specification	
Body:	75mm aluminium
Extrusion:	65mm (max)
Weight:	5.75kg
Dimensions:	140(W) x 155-720(D) x 530(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-EXTRUDE1	Wall Mounted Clay Extruder with Set of Dies		
AR-EXTRUDE1B	Optional Set of 3 Hollow Dies (round, hexagonal and square) for AR-EXTRUDE1		

Clay Slab Roller



This roller has been designed to provide an extremely efficient and reliable method of producing slabs of clay for hand-building or tile production. The large single roller is made from rust-proof material for long life and to avoid clay contamination. The slab roller has fully collapsible legs for easy transportation and comes complete with a set of high quality rolling cloths. Additional cloths can

be purchased. Alternative hand-wheel designs are available to provide extra leverage or a more compact work area.

Slab Size:	1020(D) x 470(W)mm
Weight:	70kg
Dimensions:	820(W) x 1220(D) x 1090(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £* <small>*See Pricing Information on page 2</small>	
AR-SLABROLL3	Clay Slab Roller

Clay Wedging Bench



A professional wedging bench which incorporates a high quality wooden frame and has a compressed concrete top fitted which is ideal for wedging clay.

Weight:	90kg
Dimensions:	1260(W) x 660(D) x 760(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Return and Collect

Prices £* <small>*See Pricing Information on page 2</small>	
AR-WEDGE1	Wedging Bench

Modelling Stand



Sturdily constructed in clear-varnished beechwood, this modelling stand features high stability and a superb finish. The working height is adjustable with nine set positions from 890mm to 1360mm. The sturdy table is generously proportioned for stability and to securely accommodate a wide variety of projects.

Table Top:	400(W) x 400(D) x 21(H)mm
Weight:	18kg
Dimensions:	560(W) x 560(D) x 890-1365(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £* <small>*See Pricing Information on page 2</small>	
AR-STAND1	Modelling Stand

Fibre Glass Clay Storage Bin



This fibre glass clay bin holds up to 250kg of clay.

Weight:	58kg
Dimensions:	800(W) x 530(D) x 790(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

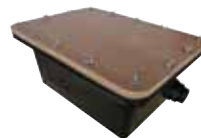
Prices £* <small>*See Pricing Information on page 2</small>	
AR-CLAYBINS	Fibre Glass Clay Storage Bin

Decorator's Turn Table

This high quality turntable is available in either aluminium or steel, and in a range of sizes. The self-lubricating bronze bush and quality bearings give the turntable a professional and smooth action which is ideal for the classroom.

Prices £* <small>*See Pricing Information on page 2</small>	
AR-TURN1	Aluminium 8" dia x 3" high
AR-TURN3	Aluminium 10" dia x 4" high
AR-TURN5	Aluminium 12" dia x 6" high
AR-TURN6	Steel 10" dia x 4" high
AR-TURN7	Steel 12" dia x 4" high

Clay Trap



This simple and highly effective unit is essential in any classroom where clay-contaminated water will be washed down the sink. The unit fits under the sink and is plumbed into the waste system to trap clay residues before they cause problems. The unit has a 20 litre capacity and will not affect drainage of normal

sink waste. It has a sealed lid secured by wing nuts which makes checking and emptying of deposited clay waste a quick and convenient process.

Water Inlet and Outer Connection:	Standard 38mm BSP
Clay slurry outlet:	78mm sealed cap
Weight:	5kg
Dimensions:	552(W) x 400(D) x 270(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £* <small>*See Pricing Information on page 2</small>	
AR-CLAYTRAP2	Clay Trap, 20 litre capacity

Standing Kick Wheel



A very functional, ruggedly constructed standing kick wheel. The momentum of the wheel is obtained by a heavy flywheel which runs on sealed ball bearings to provide a smooth quiet operation with minimum of maintenance. Standard fittings include a 225mm aluminium wheelhead, splash tray and waste pipe.

Working Speed:	Up to 130rpm
Weight:	101kg
Dimensions:	620(W) x 675(D) x 950(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Return and Collect

Prices £* <small>*See Pricing Information on page 2</small>	
AR-POTWHEEL12	Standing Kick Potters Wheel

Pottery Equipment

Potter's Wheels

Potter's Wheel Bailey



Shown here with two seats

The Bailey Wheel offers unparalleled versatility and performance in a compact and user-friendly design. It has been designed to complement a European style of throwing with the wheel head set at a greater height than most wheels of this style, allowing a more comfortable

throwing position. The Bailey wheel is powered by a super smooth, super quiet 0.5hp motor controlled by a computer-enhanced VF drive. This unique design delivers a peak equivalent of 1hp under heavy loads to give constant, smooth power throughout the speed range. The electronic speed control further promotes extremely quiet operation. The wheel has a large one-piece plastic bowl that has plenty of room for water containers and tools.

The Bailey Wheel has been designed to enable face to face teaching by adding an additional seat for the tutor. The foot control can be operated by either student or tutor and thus allows full control to be handed over to the student as their confidence grows.

Specification	
Wheel Head Diameter:	305mm
Wheel Speed:	0-280 rpm
Clay Capacity:	25kg
Motor:	0.37kW (0.5hp)
Weight:	30kg
Dimensions:	470(W) x 630(D) x 680(H)mm
Power Requirements:	240V 5A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-POTWHEEL2	Potter's Wheel Bailey with Seat		
AR-POTWHEEL5	Potters's Wheel Bailey Tutorial with two Seats		

Cowley Double Drive Potters Wheel



The Cowley Double Drive Wheel follows a classic design much loved by professional and amateur throwers alike. Drive is by the well-proven belt and cone system which offers great reliability and low maintenance. The Cowley Wheel is ideal for larger pots, but simple to operate for beginners. The wheel includes a forward and reverse switch, 0.5hp motor and an aluminium wheelhead.

Specification	
Wheel Head Diameter:	280mm
Wheel Speed:	0-280 rpm
Clay Capacity:	25kg
Motor:	0.37kW (0.5hp)
Weight:	37kg
Dimensions:	510(W) x 990(D) x 560(H)mm
Power Requirements:	230V 10A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-POTWHEEL4	Cowley Double Drive Potters Wheel		

Potter's Wheel Staffordshire



The Staffordshire Wheel is ideal for educational use and is constructed using a polished wooden cabinet, complete with an integral shelf and a two-position adjustable upholstered seat. The wheel incorporates a large moulded plastic bowl. Drive to the wheel is by an extremely smooth

mechanism which offers low noise and vibration characteristics. Torque response is consistent throughout the speed range, thus enabling large amounts of clay to be centred and thrown. The Staffordshire Wheel features a fully reversible wheelhead for the left-handed thrower.

Specification	
Wheel Head Diameter:	305mm
Wheel Speed:	0-280 rpm
Clay Capacity:	25kg
Motor:	0.37kW (0.5hp)
Weight:	70kg
Dimensions:	760(W) x 1170(D) x 920(H)mm
Power Requirements:	240V 3A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-POTWHEEL1	Potter's Wheel Staffordshire		

Special Needs Potters Wheel



This Special Needs Wheel has been designed with maximum flexibility in mind, but with no compromise to quality or the throwing capabilities of any standard wheel. The splash tray and wheel head are standard size, but the whole section can be moved up and down by crank handle to suit any height you require. With the wide splayed legs you can locate a wheel chair

or normal chair to a comfortable position for throwing. The screw-down feet stabilise the wheel when in use, and unscrew to rest the wheel on its integral castors. In this mode, the wheel becomes easy to roll away for storage or moving to a different position.

Specification	
Wheel Head Diameter:	305mm
Wheel Speed:	0-280 rpm
Clay Capacity:	20kg
Motor:	0.37kW (0.5hp)
Weight:	145kg
Dimensions:	1230(W) x 830(D) x 650-900(H)mm
Power Requirements:	240V 3A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-POTWHEEL3	Special Needs Potter's Wheel		

Mobile Ware Stillage Trolley



Shown here with eight ware boards

This Mobile Stillage Trolley is designed to securely support wareboards for storing and moving delicate pottery items between stages of production. Ware boards are a flexible way to minimise handling of fragile ceramics, and ideal for storing or displaying students work. The trolley castors make it very easy to move around when it is full. The trolley is available in two sizes: AR-WARETRK1 is able to take up to 10 ware boards and AR-WARETRK2 is able to take up to eight. (N.B. Ware boards must be purchased separately.)

Specification	910mm	1210mm
Max No. Ware boards:	10	8
Weight (without boards):	20 kg	25kg
Dimensions:	910(W) x 545(D) x 1450(H)mm	1210(W) x 545(D) x 1450(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2	
AR-WARETRK2	Mobile Ware Stillage Trolley (910 x 545 x 1450mm)		
AR-WAREBRD2	Ware Board (915 x 229mm) for AR-WARETRK2		
AR-WARETRK1	Mobile Ware Stillage Trolley (1210 x 545 x 1450mm)		
AR-WAREBRD1	Ware Board (1500 x 225 x 20mm) for AR-WARETRK1		

Clay Damp Cupboard



Damp cabinets are available in varying sizes and are specifically designed for the safe storage of green ware. The basic construction consists of zinc coated sheet steel which is powder coated externally. Each damp cabinet is fitted with neoprene door seals with lockable door handle. Four removable shelves which can be positioned at variable heights are supplied as standard.

Prices £*		*See Pricing Information on page 2	
AR-CLAYCUPBOARD1A	915(W) x 635(D) x 1270(H)mm		
AR-CLAYCUPBOARD1	1220(W) x 635(D) x 1270(H)mm		
AR-CLAYCUPBOARD1C	915(W) x 635(D) x 1830(H)mm		
AR-CLAYCUPBOARD1B	1220(W) x 635(D) x 1830(H)mm		

Lervad Pottery Cabinet



This roller shutter cabinet is strongly constructed on a Baltic pine veneered carcass with a Koto veneer interior. The cabinet is fitted with twelve Portable Drying Grates. For additional safety the beech veneered roller shutter is designed to open downwards.

Specification	
Weight:	92kg
Dimensions:	1200(W) x 400(D) x 1800(H)mm
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
SF-CB40	Lervad Roller Shutter Cupboard		

Lervad Pottery Cabinet



This roller shutter cabinet is strongly constructed on a Baltic pine veneered carcass with a Koto veneer interior. The cabinet is supplied with 6 Portable Drying Grates, 5 Shelves and 2 x 6 plastic containers. For additional safety the beech veneered roller shutter is designed to open downwards.

Specification	
Weight:	92kg
Dimensions:	1200(W) x 400(D) x 1800(H)mm
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
SF-CB41	Lervad Roller Shutter Cupboard		

Pottery Equipment

Kilns

Fireworker Kilns



Fireworker kilns are supplied complete with a controller and thermo-couple, and benefit from an additional protection relay for extra security. The controller connects to the kiln via a Harting socket which offers flexibility for installation. The kilns feature sturdy brick construction with brick door seals within a powder-coated steel chassis. An adjustable-clasp door lock provides security and efficient sealing during firing. The kilns use high grade Kanthal A1 spiral wound elements for long life and energy efficiency. Elements are located in traditional grooves on both the side walls and the floor of the kiln. This allows uniform heat distribution throughout the chamber. In addition the elements are graded from top to bottom, further aiding even temperature distribution.

Fireworker kilns can be bench-mounted provided that the bench has been fireproofed. Alternatively, a sturdy and convenient stand has been developed especially for the fireworker kilns (as shown above). The stand has a built in shelf and the dimensions are 660(W) x 670(D) x 720(H)mm.

Specifications	P5910	P5911
Firing Capacity:	50 litres (1.77cu/ft)	68 litres (2.40cu/ft)
Max Temp:	1300°C	
Power:	4.5kW	5.5kW
Weight:	85kg	97kg
Chamber Dimensions:	400(W) x 380(D) x 350(H) mm	400(W) x 380(D) x 460(H) mm
External Dimensions:	640(W) x 680(D) x 700(H) mm	640(W) x 680(D) x 820(H) mm
Power Requirements:	240V 20A Fused switch-disconnector	240V 30A Fused switch-disconnector
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect	

Prices £*	*See Pricing Information on page 2	
AR-KILN26	P5910 Fireworker 50 litre (inc controller & furniture set)	
AR-KILN27	P5911 Fireworker 68 litre (inc controller & furniture set)	
AR-KILN27B	Stand suitable for kilns AR-KILN26/27	
AR-KILNC10UP	Controller upgrade from CERA-2 (2 programs, 3 segments) to CERA-10 (10 programs, 10 segments) - see page 137.	

Heatworker Kilns



Heatworker kilns have similar features and equipment to the smaller Fireworker models and will probably meet the capacity requirements of most schools and colleges with a busy pottery section.

Heatworker kilns achieve excellent energy efficiency by using durable low thermal-mass insulation brick and high grade backup insulation board to form the chamber. Durability and protection is ensured with a robust pressed-steel powder-coated frame and stainless steel surrounds. Heavy duty spiral wound elements are used to heat the kiln. These elements are tube-mounted for optimum efficiency on both the side walls and floor of the kiln, to allow uniform heat distribution throughout the chamber. In addition, elements are graded from top to bottom to further aid even temperature distribution within the kiln.

Specifications	P5941	P5942	P5943
Firing Capacity:	86 litres (3.04cu/ft)	128 litres (4.52cu/ft)	171 litres (6.04cu/ft)
Max Temp:	1300°C		
Power:	6kW	7.5kW	9kW
Weight:	240kg	270kg	315kg
Chamber Dimensions:	410(W) x 380(D) x 560(H)mm	410(W) x 450(D) x 680(H)mm	410(W) x 550(D) x 730(H)mm
External Dimensions:	760(W) x 860(D) x 1450(H)mm	760(W) x 1000(D) x 1560(H)mm	760(W) x 1000(D) x 1650(H)mm
Power Requirements:	415V 15A or 240V 30A, Fs-d	415V 15A or 240V 40A Fused switch-disconnector	
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect		

Prices £*	*See Pricing Information on page 2	
AR-KILN14	P5941 Heatworker 86 litre (inc controller & furniture set)	
AR-KILN15	P5942 Heatworker 128 litre (inc controller & furniture set)	
AR-KILN16	P5943 Heatworker 171 litre (inc controller & furniture set)	
AR-KILN14C	Zintec Hood & Mounting Brackets for AR-KILN14	
AR-KILN15C	Zintec Hood & Mounting Brackets for AR-KILN15	
AR-KILN16C	Zintec Hood & Mounting Brackets for AR-KILN16	
AR-KILNC10UP	Controller upgrade from CERA-2 (2 programs, 3 segments) to CERA-10 (10 programs, 10 segments) - see page 137	

Lightmaster Kilns



Lightmaster kilns share the same features and build-quality of the Heatworker and Firemaster models and will be ideal for schools and colleges requiring a traditional front loading kiln with significantly enhanced capacity.

The kilns are constructed of durable low thermal mass insulation brick with two high grade backup insulation boards. Durability and protection is ensured with a robust pressed-steel powder-coated frame and stainless steel surrounds. Heavy duty Kanthal A1 spiral wound elements are used to heat the kiln. These elements are mounted in grooves on both the side walls and floor of the kiln, to allow uniform heat distribution throughout the chamber. In addition, elements are graded from top to bottom to further aid even temperature distribution within the kiln. The kilns have adjustable clasp door locks fitted and stainless steel surrounds. They also have brick to brick door seals and type 'R' thermocouples as standard fittings. The kilns are energy efficient and have a roof and door vent for use during firing and to aid cooling.

Specifications	P5120	P5121
Firing Capacity:	210 litres (7.42cu/ft)	250 litres (8.83cu/ft)
Max Temp:	1300°C	
Power:	11kW	13kW
Weight:	310kg	330kg
Chamber Dimensions:	450(W) x 630(D) x 730(H) mm	450(W) x 630(D) x 860(H) mm
External Dimensions:	760(W) x 1030(D) x 1580(H)mm	760(W) x 1030(D) x 1580(H)mm
Power Requirements:	415V 20A or 240V 50A Fused switch-disconnector	415V 20A or 240V 63A Fused switch-disconnector
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect	

Prices £*	*See Pricing Information on page 2	
AR-KILN17	P5120 Lightmaster 210 litre (inc controller & furniture set)	
AR-KILN18	P5121 Lightmaster 250 litre (inc controller & furniture set)	
AR-KILN17C	Zintec Hood & Mounting Brackets for AR-KILN17/18	
AR-KILNC10UP	Controller upgrade from CERA-2 (2 programs, 3 segments) to CERA-10 (10 programs, 10 segments) - see opposite.	

Ceramaster Kilns



The Ceramaster is a semi-industrial kiln and ideal for schools and colleges needing a large capacity kiln for a busy full-time ceramics studio.

The kilns are constructed of a durable low thermal mass insulation brick with a high grade backup insulation board. The roof is of flat arch construction, again with two layers of backup insulation. This is all enclosed within a robust high quality pressed steel powder coated frame. Heavy duty spiral wound elements are tube mounted for optimum efficiency and sited on both side walls and floor of the kiln for even heat distribution. All kilns in the Ceramaster range are now fitted with a manual damper as standard.

Specifications	P5229	P5231	P5233
Firing Capacity:	235 litres (8.3cu/ft)	325 litres (11.5cu/ft)	505 litres (17.8cu/ft)
Max Temp:	1300°C		
Power:	13kW	18kW	26.5kW
Weight:	370kg	450kg	540kg
Chamber Dimensions:	610(W) x 610(D) x 630(H)mm	610(W) x 610(D) x 860(H)mm	610(W) x 840(D) x 980(H)mm
External Dimensions:	950(W) x 1050(D) x 1570(H)mm	950(W) x 1050(D) x 1600(H)mm	950(W) x 1280(D) x 1800(H)mm
Power Requirements:	415V 20A or 240V 63A, Fused switch-disconnector	415V 30A Fused switch-disconnector	415V 45A Fused switch-disconnector
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect		

Prices £*	*See Pricing Information on page 2	
AR-KILN33	P5229 CeraMaster 235 litre (inc controller & furniture set)	
AR-KILN35	P5231 CeraMaster 325 litre (inc controller & furniture set)	
AR-KILN37	P5233 CeraMaster 505 litre (inc controller & furniture set)	
AR-KILN33C	Kiln Canopy for AR-KILN33	
AR-KILN35C	Kiln Canopy for AR-KILN35	
AR-KILN37C	Kiln Canopy for AR-KILN37	
AR-KILNC10UP	Controller upgrade from CERA-2 (2 programs, 3 segments) to CERA-10 (10 programs, 10 segments) - see below	

Kiln Controllers

The CERA-2 controller is supplied as standard with each kiln. It has two programs, each with three segments - delay start, three heating/cooling ramps, soak, cut-off and program pause. It is a straight forward controller for pottery firing where usually two programs are used. Having three ramps allows for a warming or a cooling phase in the program.

An upgrade option is available to the CERA-10 controller at time of purchase of the kiln. The CERA-10 controller has ten programs, each with ten segments - delay start, ten heating/cooling ramps, a target temperature, soak, cut-off and program pause. This advanced controller is ideal for firing where a range of programs are frequently used. The CERA-10 can be used for any firing requiring close control over multiple heating and cooling ramps such as macro crystal glazes and for glass slumping and fusing.

Pottery Equipment

Kilns / Spraybooth

Top Loading Kilns



Topworker kilns are built to achieve professional standards of firing control and efficiency, but are of compact design to make them ideal for schools and colleges. They are constructed of a low thermal mass 76mm thick insulation brick with a 25mm backup insulation, which is then enclosed within a stainless steel outer jacket. The kilns are fitted with castors (two braked) for easy movement, and two or three bung holes to assist with venting of the kiln and cooling. All the kilns are fitted with a Harting socket for flexible controller connection. For extra security, lids are fitted with a quick-release lock and have padlock provision.

Specifications	P5975	P5959
Firing Capacity:	79 litres (2.79cu/ft)	187 litres (6.61cu/ft)
Max Temp:	1300°C	
Power:	6.5kW	12kW
Weight:	88kg	140kg
Chamber Dims:	468dia. x 457(H)mm	646dia. x 571(H)mm
External Dimensions:	660dia. x 877(H)mm	838dia. x 991(H)mm
Power Requirements:	415V 10A or 240V 32A Fused switch-disconnector	415V 20A or 240V 63A Fused switch-disconnector
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect	

Prices £*		*See Pricing Information on page 2
AR-KILN19	P5975 Topworker 79 litre (inc controller & furniture set)	
AR-KILN22	P5959 Topworker 176 litre (inc controller & furniture set)	
AR-KILN19C	Extraction hood for AR-KILN19	
AR-KILN22C	Extraction hood for AR-KILN22	
AR-KILN10UP	Controller upgrade from CERA-2 (2 programs, 3 segments) to CERA-10 (10 programs, 10 segments) - see page 137	

Test Kiln



This is a small kiln designed for test firing clays and glazes without having to fire a large kiln. The kiln comes with a controller and full kiln furniture set. It can be bench mounted provided the work surface is fireproof.

Specification	
Firing Capacity Ltrs (cu/ft):	9 litres (0.32 cu/ft)
Max Temp:	1300°C
Power:	2.5kW
Weight:	50kg
Chamber Dimensions:	180(W) x 230(D) x 230(H)mm
External Dimensions:	350(W) x 490(D) x 450(H)mm
Power Requirements:	240V 13A, 13A Socket
Warranty:	UK Mainland: 3 Years On-Site Elsewhere: 3 Years Return and Collect

Prices £*		*See Pricing Information on page 2
AR-KILN32	P5900 Test Kiln 9 Litres (inc controller & furniture set)	
AR-KILN27B	Stand for AR-KILN32	
AR-KILN32C	Kiln Canopy for AR-KILN32	

Wetback Spraybooth with Stand

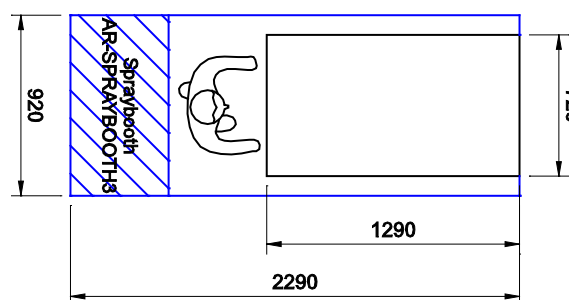


Designed to enable glazes to be applied by spray in safety, but also offers the chance to re-cycle 'overspray' material. The unit uses a continuous water curtain of recycling water and a powerful fan to trap overspray. Most of the solid particles are trapped by the water. The particles that escape then get trapped by a series of two filters, a washable stainless steel filter, followed by a washable filter bag. The material trapped by the water can be reclaimed by allowing it first to settle, and then siphoning off the water. It is not possible to separate different colours or types of glazes from the sediment but, with careful management, this ingenious spray booth offers not only a safe working environment but an economical means to apply valuable glaze material by spray gun.

Specification	
Fan:	2000CFM
Air extraction:	250 cu. ft/min
Working Depth:	350mm
Weight:	118kg approx
Hood Internal Dimensions:	625(W) x 420(D) x 638(H)mm
Dimensions External:	720(W) x 1290(D) x 1655(H)mm
Power Requirements:	240V 6.8A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available in DXF / DWG & 2D Design formats. See page 10.



Prices £*		*See Pricing Information on page 2
AR-SPRAYBOOTH3	Wetback Spraybooth with Stand Must be plumbed in.	

Screen Printing / Printing Press / Drying Racks / Lightboxes

Print Down Cabinets



These print-down cabinets expose indirect and direct stencils onto all types of film with sharpness and precision. Exposure is provided by mercury vapour lamps via a 6mm toughened glass screen. A handy light box facility aids setting up, viewing and spotting out. Exposure times are, of course, digitally controlled.

Specification	AR-SPCAB1	AR-SPCAB2
		115kg
Dimensions:	880(W) x 700(D) x 850(H)mm	1310(W) x 910(D) x 960(H)mm
Power Requirements:	240V 2.4A, 13A Socket	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return to Base	

Prices £*		*See Pricing Information on page 2	
AR-SPCAB1	Print Down Cabinet - Exposure Area 508 x 382mm		
AR-SPCAB2	Print Down Cabinet - Exposure Area 762 x 508mm		

A2 / A1 Screen Printing Systems



A1 System

These superb screen printing systems are supplied complete with a stand and whisper-quiet vacuum system. Both models will accommodate material up to 50mm thick and have frame-lift angle stops which are adjustable to zero. Vacuum operation is automatic as the screen is lowered for printing. The melamine printing bed and work surfaces are ink and solvent resistant. These machines are robustly constructed for continuous use.

Specification	A2	A1
Vacuum bed area:	508 x 380mm	594 x 840mm
Max outside screen size	785 x 635mm	1040 x 725mm
Weight	43kg	60kg
Dimensions:	880(W) x 850(D) x 900(H)mm	1092(W) x 1200(D) x 900(H)mm
Power Requirements:	240V, 13A Socket	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2	
AR-SPBED-A2S	Screen Printing Bed A2 with stand		
AR-SPBED-A1S	Screen Printing Bed A1 with stand		

Screen Washout Booth



This screen washout booth is ideal for stencil development, or to wash out screens for re-use. The booth is suitable for water-based screen printing products and is constructed from polypropylene on a powder-coated steel base frame. The unit is fitted with a mains water valve on the frame to which the optional handspray can be attached. If local regulations require it, the optional waste treatment unit will filter and trap waste emulsions and solid material.

Prices £*		*See Pricing Information on page 2	
AR-SPTROUGH4	Polypropylene Screen Washout Booth, inner size 1220 x 1220mm. <i>Must be plumbed in.</i>		
ARP-SP-SPR1	Handspray on hose from leg-mounted valve for AR-SPTROUGH4		
AR-WASTE1	Polypropylene Gravel Filtration Unit for the treatment of water waste from stencil stripping. (Single unit, area 600 x 500mm). <i>Must be plumbed in.</i>		

Print Press Horizontal



Suitable for lino and woodcut prints as well as etchings. Stable aluminium cast frame, with 80mm diameter steel rollers. The printing table is made from multiplex with a bolted, zinc-plated 2.5mm thick steel plate. The prints are guided by four bearings mounted in the sides. N.B. Colour may vary.

Specification	
Weight:	34kg
Printing Table:	500 x 700mm
Warranty:	UK Mainland: 2 Years Return to Base Elsewhere: 2 Years Return and Collect

Prices £*		*See Pricing Information on page 2	
AR-HPRESS1-300	ABIG Horizontal Printing Press, 300mm wide with plate size 300 x 700mm (inc. 3mm felt sheet)		
AR-HPRESS1-350	ABIG Horizontal Printing Press, 350mm wide with plate size 350 x 700mm (inc. 3mm felt sheet)		
AR-HPRESS1-400	ABIG Horizontal Printing Press, 400mm wide with plate size 400 x 700mm (inc. 3mm felt sheet)		
AR-HPRESS1-500	ABIG Horizontal Printing Press, 500mm wide with plate size 500 x 700mm (inc. 3mm felt sheet)		

Drying Racks



AR-DRYRACK11



AR-DRYRACK16

These robust racks feature steel construction for strength, with plastic-coated racks for durability and easy maintenance. The smaller unit will easily accommodate A3 work, the larger unit will be needed for A2 sizes.

Both racks provide a compact solution for drying student's art work.

Prices £*		*See Pricing Information on page 2	
AR-DRYRACK16	20 Shelf Double Sided Table Top Drying Rack, accommodates paper A5 to A3 size. 750 x 500 x 360mm		
AR-DRYRACK11	40 Shelf Mobile Drying Rack, shelf size 600 x 450mm, 4 castors (2 lockable)		

LightPad Lightbox

The new LightPad series of lightboxes uses super-bright LEDs for low energy consumption, cool operation and a lifetime of trouble free operation. No more dead bulbs to change! They provide perfect, even illumination to a double layered worksurface housed in a slim, yet durable, aluminium frame. Supplied complete with 240V power adaptor.



Prices £*		*See Pricing Information on page 2	
AR-LIGHTBOX14	LightPad A930 (A4, 229 x 305mm)		
AR-LIGHTBOX15	LightPad A940 (A3, 305 x 432mm)		
AR-LIGHTBOX16	LightPad A950 (A2, 432 x 610mm)		

Art & Design Equipment

Trimmers / Airbrush / 3D Pens / Easels

Rotatrim Professional Trimmers



The Rotatrim system uses a small rotary blade to cleanly cut paper and card. Simple guarding keeps fingers well away from sharp edges, but the edge being cut remains in full view. The laminated MDF baseboard is graduated for accurate work placement, and a transparent, self-clamping strip secures the work while still allowing a clear view of the cut. These well-proven machines feature self-sharpening tungsten steel blades and twin chromed-steel guide rails to ensure consistent accuracy and long life. A patented Overload Protection system on M30 models and above will protect the machine from over-ambitious use. Rotatrim machines include a five-year warranty and lifetime servicing free of labour charges.


Specification	M15 A4+	M20 A3+	M30 A2+	M36 A1+
Cutting Length:	382mm	508mm	763mm	914mm
Cutting Capacity:	3mm	3mm	3mm	2mm
Warranty:	UK Mainland: 5 Years Return to Base Elsewhere: 5 Years Return and Collect			

Prices £*	*See Pricing Information on page 2	Standard (ex VAT)	Education Only (UK)
AR-CUTTRIM12	Rotatrim Professional M15 A4+		
AR-CUTTRIM14	Rotatrim Professional M20 A3+		
AR-CUTTRIM16	Rotatrim Professional M30 A2+		
AR-CUTTRIM16A	Stand for M30 with integrated waste catcher		
AR-CUTTRIM17	Rotatrim Professional M36 A1+		
AR-CUTTRIM17A	Stand for M36 with integrated waste catcher		

Airbrush Kit



Airbrushing is the technique of choice for achieving professional standards of finish for models and prototype products. In addition, airbrushing provides Graphic Artists and Designers with a uniquely creative tool for image making on a wide variety of media. This complete kit contains everything you need to get started including a market-leading Iwata Revolution BR airbrush and an Iwata Studio-series Silver Jet compressor. To help you start without delay, the kit also includes LifeColour acrylic paints and airbrush cleaners.

Prices £*	*See Pricing Information on page 2	
AR-AIRBRUSH2	Airbrush Kit c/w Silver Jet Compressor. (Contains Iwata Revolution BR Airbrush, Iwata Studio Series Silver Jet Compressor, Medea Airbrush Cleaner 188ml for use with acrylics; Premi Air Foaming Airbrush Cleaner 150ml for use with acrylics, Premi Air Liquid Reamer Airbrush Cleaner 150ml for use with enamels; LifeColor Matt White 22ml; LifeColor Matt Black 22ml; LifeColor Thinner 22ml, Set of 6 LifeColor 22ml Acrylic Paints)	
AR-AB2MT2	Sparmax Silver Bullet Plus Moisture Trap Filter for Silver Jet Compressor. With adjustable bleed valve (pressure adjust)	
AR-AB2MT1	Sparmax Silver Bullet Moisture Trap Filter for Silver Jet Compressor.	

3D Printing Pens



The 'manual' way to do 3D printing. See page 63 for details.

Table / Studio Easels




This range of high quality solid Elm easels will accommodate various sizes of canvases either table or floor standing.

Prices £*	*See Pricing Information on page 2	
AR-EASEL5	Table Easel, Solid Elm. Holds canvas up to 550mm height.	
AR-EASEL6	Radial Studio Easel. Solid Elm. Flexible height (1.5-2.5m) and tilt. Holds canvas up to 1230mm height. Can also accommodate two canvases.	
AR-EASEL7	A' frame Studio Easel, 600 x 870 x 2310mm. Holds canvas up to 1270mm height. Folds flat for easy storage. Easy adjustment - flexible height and tilt.	

Schepach Chisa 7 Morticer



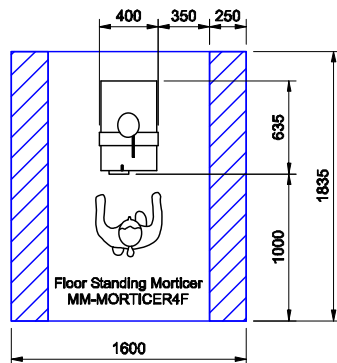
 Emergency Foot Stop supplied as standard

This morticer is likely to meet the needs of many schools and colleges. The main headstock, table and vertical machine column are all made in solid cast iron resulting in a stable, vibration free mortising machine. Adjustable guides ensure that any possible movement from years of constant use can be taken up so that the machine always remains as accurate as the day it is purchased. The morticer has big handwheels for easy table adjustment and the base has a fully lockable door.

Specification	
Max. Chisel Size:	25mm
Table Movement:	270(W) x 150(D)mm
Bench/Floor Mounted:	Floor
Motor:	0.75kW (1hp)
Weight:	91kg
Dimensions:	635(W) x 400(D) x 1010(H) mm
Power Requirements:	240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years Return to Base Elsewhere: 2 Years Return and Collect

CAD Drawing (with Safe Working Area)


Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-MORTICER4F	Mortice Machine Schepach Chisa 7 c/w base + Emergency Foot Stop	

Sedgwick 571 Morticer



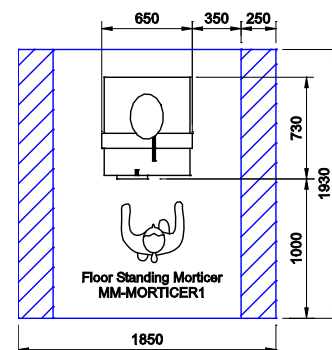
 Emergency Foot Stop supplied as standard

Designed for a lifetime's use in a professional workshop, this machine is regarded by many as the industry standard for hollow chisel morticers. The table, column and head are all made from high quality cast iron and mounted on a substantial steel base. A single handwheel controls all the table movements - left to right and front to back. Operation is simple and numerous stops are provided for repeat work. This makes the 571 an ideal machine for a training environment.

Specification	
Max. Chisel Size:	25mm (softwood); 19mm (hardwood)
Table Movement:	400(W) x 90(D)mm
Bench/Floor Mounted:	Floor
Motor Power:	1.1kW (1.5hp)
Weight:	169kg
Dimensions:	650(W) x 730(D) x 1520(H)mm
Power Requirements:	415V 1.1kW or 240V 1.1kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-MORTICER1FT	Sedgwick 571 Mortice Machine (3 Phase) + Emergency Foot Stop	
MM-MORTICER1FS	Sedgwick 571 Mortice Machine (1 Phase) + Emergency Foot Stop	

Bandsaws

TechSoft Minimax Bandsaws

High Quality Bandsaws, Ideal for Educational Use



The Essential Machine

If there's one power saw a busy workshop can't live without then it's a good bandsaw. A good machine will be solidly built, have a positive feel when setting up, and hold its settings to preserve accuracy.

TechSoft and SCM – Global Quality, Local Support

There is no shortage of makes and models to choose from these days, but not all machines are the same and even 'trusted brands' will not necessarily possess the quality that their badge suggests. To give schools and colleges the quality of machine they need at an affordable price, TechSoft are delighted to have entered into a partnership with the Italian company SCM for bandsaws and, indeed, our full range of woodworking machinery. SCM have been established for over 50 years and are now global leaders in the design, manufacture and supply of production machinery for all sectors of the furniture and construction industry. Products range from huge CNC-controlled machines for mass production, to the Minimax range of traditional machines for workshops, schools and colleges. All machines are built to the highest standards at SCM's state-of-the-art plant in Rimini, and all undergo rigorous quality procedures to ensure years of reliable service. In the UK, SCM's large and well established facility in Nottingham provides the assurance of speed, and dedicated, service and support should it be needed.

Why Do I Need a Bandsaw?

Nothing beats a bandsaw for versatility. With the right blade you can cut any timber, most plastics, and even aluminium. Cuts can be straight, curved or angled in any plane. Bandsaws will tackle deeper cuts than most saws so it is quite possible to 'deep-rip' wide boards into matching thinner boards, or even mill your own planks from heavier stock. Because blades are comparatively thin, the kerf (or cut-width) is thin so less of your precious material ends up as sawdust, and there is less waste for an extraction system to deal with. SCM bandsaws are built to high standards with secure blade-guide systems, rigid construction and solid, accurately machined castings. Using the fences and guides provided, they will achieve results every bit as accurate as a circular saw although (as with any bandsaw) the sawn surface will need attention to remove the fine saw marks.

Choosing the right Bandsaw

By choosing a TechSoft Minimax bandsaw you can have confidence in knowing that your machine will perform superbly in all the applications outlined. Capacity is important and both our models are likely to have more than enough cut-depth. Throat depth is more of an issue and this will dictate cross-cut capacity which in turn largely governs the physical size of the machine. If a circular saw is available then the S45NE bandsaw will probably be all that is needed to deal with trimming and re-sawing in the classroom. The heavier-duty S400PE machine will be a better bet if basic timber preparation (including milling boards) is anticipated.

Generous blade guides with fine adjustment and positive locking.



Tilting cast-iron work table with heavy-duty rip fence

Extraction port with internal baffle to maximise efficiency.



Heavy cast-iron bandwheels running on high quality, sealed for life, bearings.

TechSoft Minimax S45NE

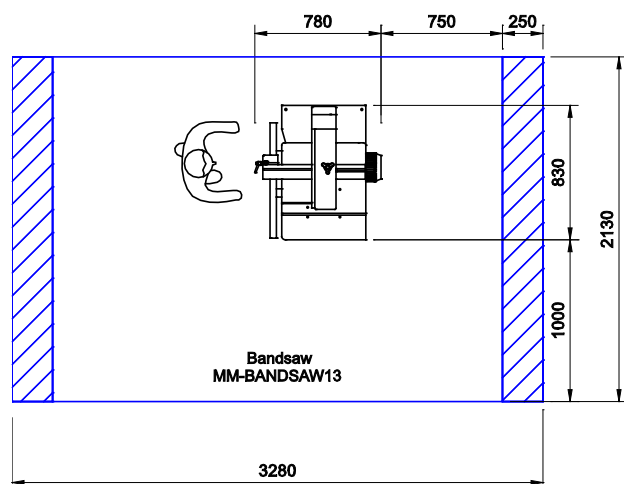


The ideal machine for re-sawing basic stock and all general-purpose use in the classroom or Preparation Room. The S45NE is widely respected in professional joinery and cabinet-making workshops, and features a level of sturdiness and build-quality that sets it apart from other machines in its class. Cast iron bandwheels and precision upper and lower blade guides eliminate 'wander' to ensure accurate cuts both against the fence and through the material. An extruded aluminium rip fence, mitre fence, key and foot-stop switches and automatic braking are supplied as standard with this machine.

Specification	
Table Size:	600 x 520mm
Table Tilt:	0° to 20°
Throat Width:	440mm
Clearance Height:	300mm
Blade Width:	6 - 25mm
Motor:	1 Phase: 1.8kW (2.5hp) 3 Phase: 2.2kW (3hp)
Weight:	200kg
Dimensions:	830(W) x 780(D) x 1860(H)mm
Power Requirements:	415V 2.2kW or 240V 1.9kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



TechSoft Minimax S400PE



The S400PE shares broadly similar specifications and identical safety features to the S45NE but features heavier-duty construction with a grooved table, mitre fence and a cast-iron rip fence. The S400PE will be the first choice for a preparation room where milling heavier stock is a routine requirement. It remains, however, an accurate general-purpose machine for re-sawing and trimming. The S400PE is designed for professional use and is the smallest in a series of larger capacity, industrial-rated bandsaws. If greater capacity is needed then TechSoft will be happy to discuss your requirements.

Specification	
Table Size:	620 x 450mm
Table Tilt:	0° to 20°
Throat Width:	380mm
Clearance Height:	400mm
Blade Width:	10 - 30mm
Motor:	1 Phase: 1.5kW (2hp) 3 Phase: 1.5kW (2hp)
Weight:	200kg
Dimensions:	830(W) x 610(D) x 1915(H)mm
Power Requirements:	415V 1.5kW or 240V 1.5kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-BANDSAW13KFT	TechSoft S45NE Bandsaw 3 phase <i>(includes Key Switch + Emergency Foot Stop)</i>	
MM-BANDSAW13KFS	TechSoft S45NE Bandsaw 1 phase <i>(includes Key Switch + Emergency Foot Stop)</i>	
MM-BANDSAW18KFT	TechSoft S400PE Bandsaw 3 phase <i>(includes Key Switch + Emergency Foot Stop)</i>	
MM-BANDSAW18KFS	TechSoft S400PE Bandsaw 1 phase <i>(includes Key Switch + Emergency Foot Stop)</i>	

Essential Extras

Extraction is essential when using a bandsaw. We offer a range of extractors to suit all budgets/requirements.

[Centralised Vac Extraction System, see page 186.](#)

CUSTOM-CVAC	Centralised Vac Extraction System.	
--------------------	------------------------------------	--

[Fixed Local Extraction System, see page 187.](#)

MM-EXTRACT102P	TS102 Extractor with attachment fittings for Floor Standing Bandsaw <i>(manual switch)</i> . Please specify whether 1 phase or 3 phase is required.	
MM-SWITCH10	Auto-switched upgrade for fixed extractor <i>(fitted to machine at time of purchase)</i>	

[Mobile Extraction System, see page 189.](#)

MM-EXTRACTION70P1	Minimax Dust Extractor with Attachment Fittings. Please specify whether 1 phase or 3 phase is required.	
MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor <i>(fitted to machine at time of purchase)</i>	

Circular Saws

TechSoft Minimax Circular Saws

Ultra Capable Circular Saws with True Sliding Tables



The Workshop Workhorse

The centre-piece of any timber preparation area is usually a circular sawbench – and for good reason. A good circular saw will provide a solid base to support the material and will be precision-engineered to provide repeat accuracy and a clean, efficient cutting action.

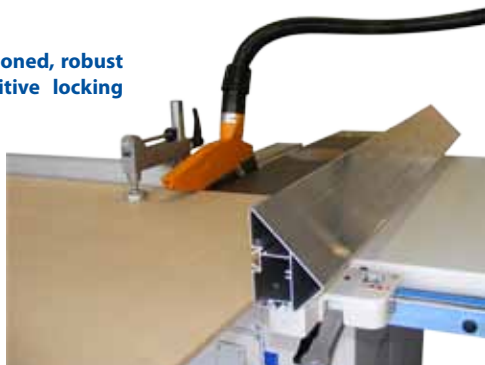
TechSoft and SCM – Global Quality, Local Support

There is no shortage of makes and models to choose from these days, but not all machines are the same and even 'trusted brands' will not necessarily possess the quality that their badge suggests. To give schools and colleges the quality of machine they need at an affordable price, TechSoft are delighted to have entered into a partnership with Italian company SCM for circular saws and, indeed, our full range of woodworking machinery. SCM have been established for over 50 years and are now global leaders in the design, manufacture and supply of production machinery for all sectors of the furniture and construction industry. Products range from huge CNC-controlled machines for mass production, to the Minimax range of traditional machines for workshops, schools and colleges. All machines are built to the highest standards at SCM's state-of-the-art plant in Rimini, and all undergo rigorous quality procedures to ensure years of reliable service. In the UK, SCM's large and well established facility in Nottingham provides the assurance of speedy and dedicated service and support should it be needed.

Why Do I Need a Circular Saw?

Timber is seldom supplied in exactly the right sections for any given job and buying it prepared to size is very expensive. Each of our machines will quickly and accurately rip larger hard or softwood sections down to precise dimensions and to virtually any length. They all feature a tilting arbor so bevelled cuts will be no problem. All are fitted with a quality blade so the sawn surface will often be clean enough for immediate use. A second key application for a circular saw is for cross-cutting stock to length, and for breaking-down and dimensioning panel products. With the right machine you will quickly be able to prepare batches of stock to length, width and thickness, and provide accurately-dimensioned panels with clean, square edges.

Generously proportioned, robust rip fence with positive locking and adjustment.



Choosing the Right Circular Saw

By choosing an SCM machine from TechSoft you can have confidence in knowing that your machine will be superbly engineered to give lasting repeat accuracy. These are powerful machines so feature robust construction to support the motor/arbor assembly and to withstand the considerable forces that long lengths of timber can apply. Circular saws are seldom used for deep-ripping, so all the machines we list will cut stock thick enough for most schools and colleges. Dimensioning panel products will be the key factor in determining which saw is right for you. Even the 'baby' SC1 machine will cut any width from an 8' x 4' sheet, but (for cross-cutting) a full sheet sitting across the sawbench takes a lot of space and needs a lot of support. If this is a priority then look at the larger machines with larger sliding and main tables, but be aware of the machine 'footprint' once safe working areas are taken into account – they need a lot of space! All machines feature ergonomically-designed controls that have a positive action and (of course) meet all safety requirements for guarding, isolation and extraction capability.

Bearing-guided sliding table with built-in length stop and material clamp for accurate cross- cutting.

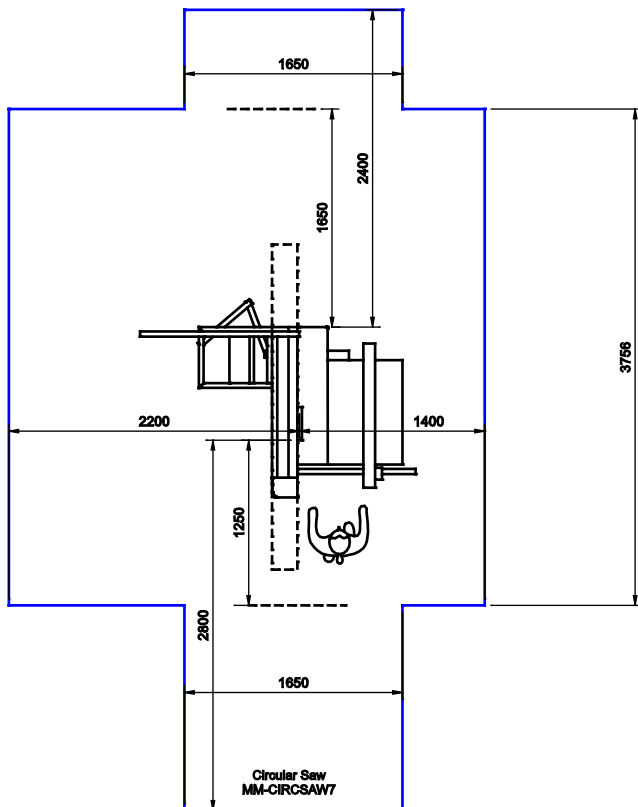


TechSoft Minimax SC1E Genius



This compact machine will meet most needs for accurate preparation of smaller stock and (with assistance to support the board) will cut any width from a standard 8' x 4' sheet, but will not be suitable for cross-cutting full sheets. If man-made boards can be broken-down first then the sliding table and main rip fence will allow batch preparation of panels up to 700mm in length and/or width.

Specification	
Saw Blade Diameter:	250mm
Cutting depth at 90°:	80mm
Max. squaring stroke:	1200mm
Cutting width on rip fence:	700mm
Speed:	4000rpm
Motor:	1.5kW
Weight:	170kg
Dimensions:	2084(W) x 2460(D) x 1250(H)mm
Power Requirements:	415V 1.5kW or 240V 1.5kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect



TechSoft Minimax SC2E Classic



This larger version of the SC1 machine features greater cutting capacity, heavier construction and a more powerful motor to cope with sustained 'production-style' work. The sliding table will comfortably cross-cut full size sheet materials to 900mm (upgradeable to 1270mm) widths, and this may well be sufficient for most schools or colleges.

Specification	
Saw Blade Diameter:	250mm
Cutting depth at 90°:	80mm
Max. squaring stroke:	1515mm
Cutting width on rip fence:	900mm Upgradeable to 1270mm
Speed:	4000rpm
Motor:	2.2kW (415V) or 1.8kW (240V)
Weight:	280kg
Dimensions:	2400(W) x 3400(D) x 1250(H)mm
Power Requirements:	415V 2.2kW or 240V 1.9kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-CIRCSAW7KFT	TechSoft Minimax SC1E Circular Saw 3 phase (includes Key Switch + Emergency Foot Stop)	
MM-CIRCSAW7KFS	TechSoft Minimax SC1E Circular Saw 1 phase (includes Key Switch + Emergency Foot Stop)	
MM-CIRCSAW12KFT	TechSoft Minimax SC2E Classic Circular Saw 3 phase (includes Key Switch + Emergency Foot Stop)	
MM-CIRCSAW12KFS	TechSoft Minimax SC2E Classic Circular Saw 1 phase (includes Key Switch + Emergency Foot Stop)	
MM-CIRCSAW12U	Upgrade Package for MM-CIRCSAW12 (includes 1270mm cut width on high rigidity cam-locking rip fence)	

Essential Extras

Extraction is essential when using a circular saw. We offer a range of extractors to suit all budgets/requirements.

[Centralised Vac Extraction System, see page 186.](#)

CUSTOM-CVAC	Centralised Vac Extraction System.	
--------------------	------------------------------------	--

[Fixed Local Extraction System, see page 187.](#)

MM-EXTRACT100P	TS100 Extractor with attachment fittings for Circular Saw (manual switch). Please specify whether 1 phase or 3 phase is required.)	
MM-SWITCH10	Auto-switched upgrade for fixed extractor (fitted to machine at time of purchase)	

[Mobile Extraction System, see page 189.](#)

MM-EXTRACTION70P2	Minimax Dust Extractor with Attachment Fittings for Circular Saw (manual switch). Please specify whether 1 phase or 3 phase is required.)	
MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor (fitted to machine at time of purchase)	

Planer Thicknessers

TechSoft Minimax Planer Thicknessers

Solid and Reliable Planer Thicknessers, Designed for Ease of Use



The Ideal Companion Machine

A solidly built and reliable planer/thicknesser is an important compliment to a good circular saw or bandsaw. There is no better machine to achieve accurate datum faces on rough, bowed or warped boards, and nothing to beat the consistent accuracy and smooth surface-finish that they produce.

TechSoft and SCM – Global Quality, Local Support

There is no shortage of makes and models to choose from these days, but not all machines are the same and even 'trusted brands' will not necessarily possess the quality that their badge suggests. To give schools and colleges the quality of machine they need at an affordable price, TechSoft are delighted to have entered into a partnership with Italian company SCM for planer/thicknessers and, indeed, our full range of woodworking machinery. SCM have been established for over 50 years and are now global leaders in the design, manufacture and supply of production machinery for all sectors of the furniture and construction industry. Products range from huge CNC-controlled machines for mass production, to the Minimax range of traditional machines for workshops, schools and colleges. All machines are built to the highest standards at SCM's state-of-the-art plant in Rimini, and all undergo rigorous quality procedures to ensure years of reliable service. In the UK, SCM's large and well established facility in Nottingham provides the assurance of speedy and dedicated service and support should it be needed.

Why Do I Need a Planer Thicknesser?

Timber can only be sawn to the required dimensions if it is flat and has a true datum edge to run against the saw fence. Softwood usually needs little attention but hardwoods are a different matter. The cheapest and widest selection of hardwoods are always available as sawn boards and these need preparation by planing first, then sawing and then thicknessing to precise dimension. If the material is already flat and true then sawing, or maybe just thicknessing, is all that is needed to achieve a smooth, planed finish. Our two machines combine both planing and thicknessing into one compact, robust unit. For planing, the material is run across the large surface tables where the cutter block achieves smooth datum faces. To thickness the timber, boards are fed in below the tables where a power-feed takes up the material and feeds it through at steady speed under the cutter block. These are preparation room machines that offer the chance of premium grade material at economy prices in any 'bespoke' section.



Choosing the Right Planer-Thicknesser

By choosing an SCM machine from TechSoft you can have confidence in knowing that your machine will be superbly engineered to give lasting repeat accuracy. These powerful machines all feature accurately-machined surface tables and robust construction to support the cutter block and feed tables. For both machines we supply a three-knife Tera cutter block as standard. This advanced system allows blades to be changed in minutes with no specialist tools. Centrifugal force holds the blades in place and a simple locking bar automatically ensures perfect alignment, perfect balance and optimum cutting performance every time.



Choice of model will largely be determined by capacity, both machines have generous thicknessing capability which is likely to exceed most demands in schools and colleges. Width is more of an issue. The FS30 model will machine boards up to 300mm wide (probably sufficient for most schools and colleges) but the FS41 machine has the added advantage of longer surface tables as well as 410mm width capacity. These longer tables will be an advantage for all work even if machining larger sizes is only an occasional requirement.

All machines feature ergonomically-designed controls that have a positive action and (of course) meet all safety requirements for guarding, isolation and extraction capability.



Converting between planing and thicknessing is quick and easy with the pivoting table. The generous extraction hood simply swings up or down into the required position.

TechSoft Minimax FS30E Genius

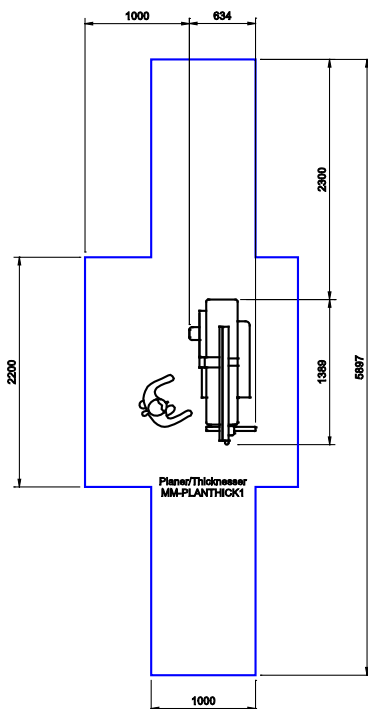


This compact model features a steel base and cast iron worktables for accurate, virtually vibration-free operation. The upper table opens to allow a chip extraction hood to be fitted and has been designed to allow the machine to be placed close to external walls. For most schools and colleges, the FS30E Genius will provide all the capacity they need with no compromise on quality.

Specification	
Max Surfacing Width:	300mm
Surfacing Table Length:	1200mm
Min / Max Thicknessing:	3 / 200mm
Cutter Block:	TERSA [®] with 3 knives
Feed Speed on Thicknesser	6m/min
Motor:	1.5kW (2hp)
Weight:	140kg
Dimensions:	634(W) x 1389(D) x 950(H)mm
Power Requirements:	415V 1.5kW or 240V 1.5kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



TechSoft Minimax FS41E Classic



This large-capacity machine will be ideal for all day-to-day work in a busy workshop and is likely to meet every requirement for larger stock preparation. Build quality is heavy and robust to withstand longer sections to be worked in confidence. The FS41E provides professional capability at an unbeatable price.

Specification	
Max Surfacing Width:	410mm
Surfacing Table Length:	1800mm
Min / Max Thicknessing:	3 / 230mm
Cutter Block:	TERSA [®] with 3 knives
Feed Speed on Thicknesser	7m/min
Motor:	3kW (4hp) 415V or 1.8kW (2.5hp) 240V
Weight:	350kg
Dimensions:	1555(W) x 570(D) x 997(H)mm
Power Requirements:	415V 3kW or 240V 1.9kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

MM-PLANTHICK1K2FT	TechSoft Minimax FS30E Planer Thicknesser 3 phase (includes Key Switch + 2 Emergency Foot Stops)	
MM-PLANTHICK1K2FS	TechSoft Minimax FS30E Planer Thicknesser 1 phase (includes Key Switch + 2 Emergency Foot Stops)	
MM-PLANTHICK2K2FT	TechSoft Minimax FS41E Planer Thicknesser 3 phase (includes Key Switch + 2 Emergency Foot Stops)	
MM-PLANTHICK2K2FS	TechSoft Minimax FS41E Planer Thicknesser 1 phase (includes Key Switch + 2 Emergency Foot Stops)	

Essential Extras

Extraction is essential when using a planer thicknesser. We offer a range of extractors to suit all budgets/requirements.

[Centralised Vac Extraction System, see page 186.](#)

CUSTOM-CVAC	Centralised Vac Extraction System.	
--------------------	------------------------------------	--

[Fixed Local Extraction System, see page 188.](#)

MM-EXTRACT105P1	TS105 Extractor with attachment fittings for Planer Thicknesser (manual switch). Please specify whether 1 phase or 3 phase is required.)	
------------------------	--	--

MM-SWITCH10	Auto-switched upgrade for fixed extractor (fitted to machine at time of purchase)	
--------------------	---	--

[Mobile Extraction System, see page 189.](#)

MM-EXTRACTION70P1	Minimax Dust Extraction with Attachment Fittings for Planer Thicknesser (manual switch). Please specify whether 1 phase or 3 phase is required.)	
--------------------------	--	--

MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor (fitted to machine at time of purchase)	
-------------------	--	--

Combination Woodworking Machines

TechSoft Minimax Combination Machines

Space Saving Combination Machines with True Sliding Tables



One Machine – Sawing, Planing & Thicknessing

Our Minimax Combination machines can provide a cost and space saving way to fully equip a preparation area. Each machine comprises a circular saw bench and a planer-thicknessener arranged back-to-back in one integrated unit. The work table is shared by both functions so, despite their compact size, combination machines retain their full capacity for either sawing or planing. The saw and planer-thicknessener are each powered by separate motors so swapping between operations is very straightforward. Needless to say, only one function at a time can be used. Mechanical and electrical control systems are built into these machines to ensure that only the function being used is 'live' and remaining systems are in a safe state.

Combination Machines in Schools and Colleges

For less than the cost of two separate machines, schools can have the precise sawing and planing capability they need for all basic stock preparation. In terms of space saving, it is best to think of combination machines as offering alternatives rather than substitutes. Separate machines need a safe working area that allows for in-feed and out-feed at each end of the machine and enough space at the side for the operator. They also need sufficient space between them to make sure one machine is not hindered by the other. Combination machines have a smaller 'footprint' but need space on all four sides. This means they need central placement in a preparation area. Where this is possible, you have the added bonus of more space to position larger boards and the ability to cross-cut longer stock on the saw table. In this situation, a combination machine will always be a space saving and convenient option.

Full Machining Capability

Despite their compact size, our Minimax combination machines do not compromise on quality or performance. The main saw table features a rise and fall tilting arbor for angled cuts with convenient handwheel adjustment and locking. A welded steel main chassis and ribbed cast iron work tables ensure accuracy and vibration free operation. Deep, positive locking fences for cross cutting and ripping feature hold-down clamps and stops for repeat working. A precision engineered sliding table runs close to the blade for accurate ripping. The smaller C30E machine includes a squaring frame to allow repeat sawing of panel components to accurate dimensions including angles and bevel cuts. The planer features a three-knife Torsa © cutter block for clean surfaces and easy blade changing. The efficient feed system allows rapid stock removal up to the maximum table width. Planing datum faces is easy to achieve - the robust saw fence provides the necessary datum and an easily adjusted bridge guard will ensure safe operation. For convenience, the main surfacing table opens toward the operator for thicknessing.

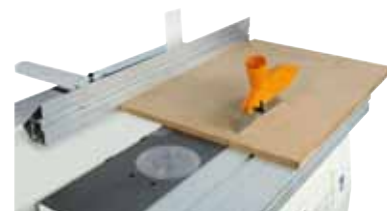
When sold commercially these machines also have a spindle moulder and optional extra slot morticer. However, current regulations (BS4163:2014, paragraph 13.3, page 64) mean that school and colleges are unable to exploit these.



TechSoft and SCM – Global Quality, Local Support

To give schools and colleges the quality of machine they need at an affordable price, TechSoft are delighted to have entered into a partnership with Italian company SCM for our full range of woodworking machinery. SCM have been established for over 50 years and are now global leaders in the design, manufacture and supply of production machinery for all sectors of the furniture and construction industry. Products range from huge CNC controlled machines for mass production, to the Minimax range of traditional machines for workshops, schools and colleges. All machines are built to the highest standards at SCM's state-of-the-art plant in Rimini, and all undergo rigorous quality procedures to ensure years of reliable service. In the UK, SCM's large and well established facility in Nottingham provides the assurance of speedy and dedicated service and support should it be needed.

**Generously proportioned,
robust rip fence with
positive locking and
adjustment.**



**Bearing-guided
sliding table with
built-in length stop
and material clamp
for accurate cross-
cutting.**

Surface Planing



Combination Woodworking Machines

TechSoft Minimax Combination Machines

TechSoft Minimax C30E Genius



The C30E is likely to provide sufficient capacity and cutting speed for most schools. Although too small to break down full 1200 x 2400mm sheets into quarters, the included squaring frame will make it easy to prepare accurate batches of large panel components. Cutting depth and width against the rip fence will almost certainly exceed the capacity needed for most student projects. The C30E shares the same planing width as the CU300E model.

Specification	
Saw:	
Saw Blade Diameter:	250mm
Cutting depth at 90°:	80mm
Max. squaring stroke:	1200mm
Cutting width on rip fence:	540mm
Speed:	4000rpm
Planer Thicknesser:	
Max Surfacing Width:	300mm
Surfacing Table Length:	1200mm
Min/Max Thicknessing:	3/200mm
Cutter Block:	TERSA with 3 knives
Feed Speed on Thicknesser:	6m/min
Overall:	
Motor:	2 x 1.8kW (2.5hp)
Weight:	320kg
Dimensions:	2084(W) x 2460(D) x 1250(H)mm
Power Requirements:	415V 3.6kW or 240V 3.6W Fused Switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-COMB1KFT	TechSoft Minimax C30E Genius Combination Machine 3 phase (includes Key Switch + 3 Emergency Footstops)		
MM-COMB1KFS	TechSoft Minimax C30E Genius Combination Machine 1 phase (includes Key Switch + 3 Emergency Footstops)		
Essential Extras			
Extraction is essential when using a combination machine. We offer a range of extractors to suit all budgets/requirements.			
Centralised Vac Extraction System, see page 186.			
CUSTOM-CVAC	Centralised Vac Extraction System.		
Fixed Local Extraction System, see page 187.			
MM-EXTRACT100P	TS100 Extractor with attachment fittings for Combination Machine (manual switch). Please specify whether 1 phase or 3 phase is required.)		
MM-SWITCH10	Auto-switched upgrade for fixed extractor (fitted to machine at time of purchase)		
Mobile Extraction System, see page 189.			
MM-EXTRACTION70P2	Minimax Dust Extractor with Attachment Fittings for Combination Machine (manual switch). Please specify whether 1 phase or 3 phase is required.)		
MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor (fitted to machine at time of purchase)		

TechSoft Minimax CU300E Classic



The same functionality as the C30E Genius but with greater machining capacity and longer tables for accurate preparation of larger stock. 820mm capacity against the rip fence means full size boards can be cut to any width. The squaring frame is therefore less important but one can be ordered as an optional item. Where there is high demand for prepared materials and thicker section tougher timbers are likely, then the CU300E will be an ideal choice.

Specification	
Saw:	
Saw Blade Diameter:	315mm
Cutting depth at 90°:	100mm
Max. squaring stroke:	1600mm
Cutting width on rip fence:	820mm
Speed:	4000rpm
Planer Thicknesser:	
Max Surfacing Width:	300mm
Surfacing Table Length:	1510mm
Min/Max Thicknessing:	3/200mm
Cutter Block:	TERSA with 3 knives
Feed Speed on Thicknesser:	7m/min
Overall:	
Motor:	2 x 2.2kW (3hp)
Weight:	420kg
Dimensions:	4002(W) x 3793(D) x 1250(H)mm
Power Requirements:	415V 4.4kW or 240V 4.4kW Fused Switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-COMB3KFT	TechSoft Minimax CU300E Classic Combination Machine 3 phase (includes Key Switch + 3 Emergency Footstops)		
MM-COMB3KFS	TechSoft Minimax CU300E Classic Combination Machine 1 phase (includes Key Switch + 3 Emergency Footstops)		
Essential Extras			
Extraction is essential when using a combination machine. We offer a range of extractors to suit all budgets/requirements.			
Centralised Vac Extraction System, see page 186.			
CUSTOM-CVAC	Centralised Vac Extraction System.		
Fixed Local Extraction System, see page 187.			
MM-EXTRACT100P	TS100 Extractor with attachment fittings for Combination Machine (manual switch). Please specify whether 1 phase or 3 phase is required.)		
MM-SWITCH10	Auto-switched upgrade for fixed extractor (fitted to machine at time of purchase)		
Mobile Extraction System, see page 189.			
MM-EXTRACTION70P2	Minimax Dust Extractor with Attachment Fittings for Combination Machine (manual switch). Please specify whether 1 phase or 3 phase is required.)		
MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor (fitted to machine at time of purchase)		

Vertical Panel Saws

Vertical Panel Saws

Koolkut KK12 Vertical Panel Saw

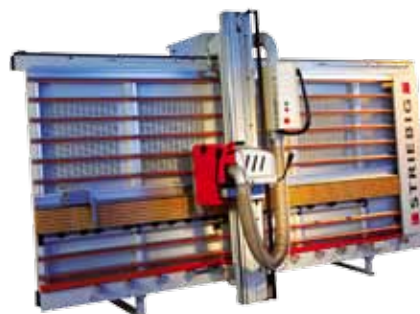


This space-saving vertical panel saw is designed for breaking down large sheet materials into manageable sizes or to precise dimensions for panel projects. It is built to industrial standards and offers a ruggedness and quality that will ensure a very long life in even the busiest school or college preparation area. Central to the design are accurate linear shafts and sealed ball bearings to give high precision and smooth operation. The saw unit will cut clean, square edges or bevels if needed. This machine will easily cope with the sheet cutting needs of any school or college. We recommend a smaller circular saw to deal with rip-cutting planks and sections. The Minimax SC1E is the perfect complement to this excellent panel saw.

Specification	
Blade Diameter:	210mm
Max Horizontal Cut:	2500mm
Max Vertical Cut:	1250mm
Cutting depth at 90/45°:	56/45mm
Motor:	1.8kW (2.4hp)
Motor Speed:	1,350-3,550rpm
Weight:	400kg
Dimensions:	3100(W) x 1170(D) x 2000(H)mm (free-standing) 3100(W) x 975(D) x 2000(H)mm (wall fix)
Power Requirements:	240V 1.8kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-PANELSAW3	Koolkut KK12 2500x1250 Vertical Panel Saw (Complete with Festo portable saw unit, TCT blade, stand, framework, infill panels, midway fence and quick-stop, dust extraction, 8m hose, generic saw blade, delivery, installation & training)	
MT-PS-RCG1	Rip Cut Gauge (0-200mm) for MM-PANELSAW3	
MT-PS-FRH1	Floating Head Router Complete with DeWalt D26200 Router for MM-PANELSAW3	
MT-PS-VBIT1	Router bit for "V-grooving" aluminium composite for MM-PANELSAW3	
MT-PS-SB1	Triple Chip Saw Blade (General Purpose blade suitable for most materials) for MM-PANELSAW3	
MT-PS-SB2	High Bevel Saw Blade (for MFC/Veneers etc.) for MM-PANELSAW3	
MT-PS-SB3	Diamond Saw Blade for MM-PANELSAW3	
CUSTOM-CVAC	Centralised Vacuum Extraction System. See page 186.	

Striebig Compact Saw



Key Switch supplied as standard

Swiss company, Striebig AG have been established for over 50 years and specialise in the supply of vertical panel saws for demanding commercial users. Striebig machines are finely engineered to give a perfectly clean saw edge and absolute parallelism. The Compact 4164 is supplied with comprehensive accessories to allow for floor or wall mounting, extraction ports for efficient dust capture and a strip cutting attachment for safe cutting of smaller pieces. Cutting capacity will easily cope with a standard 2440 x 1220mm sheet. The Striebig Compact is inherently safe to use with a fully enclosed blade, braked support rollers and an integral trapping device to prevent material movement. The optional Digital Measuring System (DMS) provides a convenient way to set up cuts to within 0.1mm and the scoring saw attachment is well worth considering. This provides an extra, smaller blade which is fractionally wider to pre-cut into the surface of the material. A scoring cut eliminates break-out resulting in clean, crisp edges on both sides of the board - even when cross-cutting veneered or laminated material.

Specification	
Blade Diameter:	250mm
Max Horizontal Cut:	3100mm
Max Vertical Cut:	1644mm
Cutting depth at 90°:	60mm
Motor:	3.9kW (5.2hp)
Motor Speed:	5250rpm
Weight:	815kg
Dimensions:	4216(W) x 1435(D) x 2390(H)mm (free-standing)
Power Requirements:	415V 4.8kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-PANELSAW5P	Striebig COMPACT 4164 Vertical Panel Saw (Complete with strip cutting attachment up to 400mm + legs for floor fixing + KeySwitch + Emergency Stop + Delivery and Installation by a Striebig Approved Engineer to UK Mainland)	
MM-PANELSAW5A	Digital Measuring System (DMS) for x and y axis for MM-PANELSAW5.	
MM-PANELSAW5B	Scoring Saw Unit for MM-PANELSAW5	
MM-PANELSAW5C	Additional Aluminium Small-Piece Supports for MM-PANELSAW5	
Essential Extras Extraction is essential when using a panel saw. We offer a range of extractors to suit all budgets/requirements. Centralised Vac Extraction System, see page 186.		
CUSTOM-CVAC	Centralised Vac Extraction System.	
Fixed Local Extraction System, see page 188.		
MM-EXTRACT105P2T	TS105 Extractor (3ph) with attachment fittings for Panel Saw (manual switch)	
MM-SWITCH10T	Auto-switched upgrade for fixed 3ph extractor, (fitted to machine at time of purchase)	
Mobile Extraction System, see page 189.		
MM-EXTRACTION70T	Minimax Dust Extractor with 1 bag (3 phase). Two wheels, two fixed.	
MM-SWITCH7	Integrated auto-switched socket for Minimax Dust Extractor (fitted to machine at time of purchase)	

Bosch GCM 12GDL Professional Mitre Saw



The GCM 12GDL Mitre saw is the ideal cross-cut machine for rapidly preparing batches of stock to accurate length with clean, truly square, ends. On each side of the table are robust integrated bench extensions that pull out to provide support for longer work and make it easy to set-up stops for rapid, accurate, repeat work. In addition, the main head tilts for bevelled cuts and the support table rotates to allow mitred cuts. Both these functions have fixed detents, (or pre-set positions), for quickly setting commonly used angles. These features can be used together for cutting compound mitres and, when doing so, the soft-grip handle can be adjusted and locked in any one of four positions for safe, comfortable control.

The GCM 12GDL can be bench mounted or used with the optional work stand (see right). This provides a secure platform and support for materials up to 3,877mm in length.



Specification	
Blade Diameter:	305mm
Cutting Capacity at 0°:	104 x 341mm
Cutting Capacity at 45° mitre:	104 x 240mm
Cutting Capacity at 45° incline:	51 x 341mm
Motor:	2kW (2.8hp)
Motor Speed:	3,800rpm
Weight:	32kg
Dimensions:	820(W) x 670(D) x 690(H)mm
Power Requirements:	240V 1.8kW, Fused switch-disconnector
Warranty:	UK Mainland & Ireland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-MITRESAW3K	Bosch GCM 12GDL Professional Glide Mitre Saw + Keyswitch	
MM-MITRESAW3B	Bosch GTA 3800 Professional Stand for MM-MITRESAW3	
MM-EXTRACTION32	TechSoft/Numatic Workshop Extractor, Double Motor. See page 190.	
MMP-EXT-CONKIT8	Connection kit: 1 Twin Motor Numatic Extractor (MM-EXTRACTION32) to Bosch Mitre Saw	
MM-SWITCH2	Auto Switch Box - Single	
CUSTOM-CVAC	Centralised Vacuum Extraction. See page 186.	
CUSTOM-LVAC	Custom Localised Extraction Unit with Purpose Designed Capture Hood - ask for details.	

Swordfish Fretsaw



The new Swordfish fretsaw from RJH has been designed specifically to meet stringent performance and safety requirements for schools and colleges. The design features fully enclosed reciprocal action and dust extraction points above and below the cutting table. The machine is based around heavy-duty steel fabrications to ensure low vibration, low noise and accurate cutting. A wide variety of blades are available and 400 – 1500 rpm variable speed with digital readout is provided as standard. Together, these features mean that a Swordfish is capable of cutting most of the plastics, timber and non-ferrous alloys to be found in a typical educational setting. A calibrated lever allows the table to be tilted from 45 to 135 degrees for angled cuts and a strong Perspex guard keeps fingers well away from the blade. Unlike many of its counterparts, the Swordfish can cut through metals as well as wood. Recent tests have shown that it can comfortably cut through 2.5 mm thick steel, 4mm thick aluminium and 6mm thick brass. Needless to say, Swordfish meets all UK and European statutory requirements for safe use in an educational setting.

Specification	
Motor:	0.18kW
Motor Speed:	1350rpm
Electrical Supply:	400V/3ph/50Hz or 230V/1ph/50Hz
Max Depth of Cut:	51mm
Throat Capacity:	535mm
Cut Speed:	400-1500rpm
Arm Tilt:	45 to 135°
Blade Size:	130mm
Work Table Size, Width x Depth:	350mm x 650mm
Weight:	67kg (bench) 87kg (pedestal)
Dimensions:	540(W) x 870(D) x 500(H)mm (bench) 540(W) x 870(D) x 1250(H)mm (pedestal)
Power Requirements:	240V 1.8kW, Fused switch-disconnector
Warranty:	UK Mainland & Ireland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Prices £*		*See Pricing Information on page 2
MM-FRETSAW13B	Swordfish SW Series Fretsaw for Bench Mounting (1 phase)	
MM-FRETSAW13P	Swordfish SW Series with Pedestal (1 phase)	
MM-FRETSAW13S	Swordfish SW Series Fretsaw with Extractor (1 phase)	
MM-FRETSAW13T	Swordfish SW Series Fretsaw with Extractor (3 phase)	

Hegner Multicut EDU



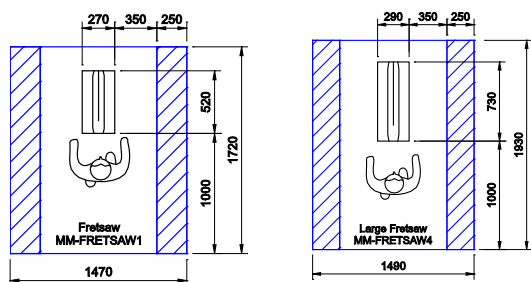
Specification	Multicut 1/1V - EDU	Multicut 2S/2SV - EDU	Multicut SE-EDU	Multicut QK-EDU
Table Size:	375 x 175mm	440 x 225mm	440 x 225mm	440 x 225mm
Table Tilt:	45° RH	45° RH to 12° LH	45° RH to 12° LH	45° RH to 12° LH
Throat Width:	365mm	460mm	460mm	560mm
No-load speed:	1440spm (1-EDU) 400-1440spm (1V-EDU)	1440spm (2S-EDU) 400-1440spm (2SV-EDU)	400-1440spm	400-1440spm
Stroke Length:	10mm	16mm	16mm	16mm
Motor:	80W (1-EDU) 100W (1V-EDU)	100W	100W	100W
Weight:	17kg	21kg	25kg	28kg
Dimensions:	270(W) x 520(D) x 400(H)mm	280(W) x 610(D) X 450(H)mm	280(W) x 610(D) X 450(H)mm	290(W) x 730(D) x 450(H)mm
Power Requirements:	240V 3A Fused switch-disconnector	240V 3A Fused switch-disconnector	240V 3A Fused switch-disconnector	240V 3A Fused switch-disconnector
Warranty:	UK Mainland: 3 Year Return to Base Elsewhere: 3 Year Return & Collect	UK Mainland: 3 Year Return to Base Elsewhere: 3 Year Return & Collect	UK Mainland: 3 Year Return to Base Elsewhere: 3 Year Return & Collect	UK Mainland: 3 Year Return to Base Elsewhere: 3 Year Return & Collect

Unique design details and superb build-quality have established Hegner as the leading manufacturer of precision fretsaws (or scroll saws) for professional and educational use. The Multicut 1 and 2S models feature alloy worktables and sufficient rigidity for general workshop use in timber and plastics. The SE and Quick models are more heavily constructed with cast iron precision-ground tables and will be ideal for more demanding applications in terms of precision and workload. Each machine is sold with an instruction book and all necessary tools.

N.B. Will require connection via foot-operated switch and ducting for dust extraction.

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*

*See Pricing Information on page 2

MM-FRETSAW6	Fretsaw, Hegner Multicut 1-EDU	
MM-FRETSAW1	Fretsaw, Hegner Multicut 1-EDU Variable Speed	
MM-FRETSAW7	Fretsaw, Hegner Multicut 2S-EDU	
MM-FRETSAW2	Fretsaw, Hegner Multicut 2SV-EDU Variable Speed	
MM-FRETSAW8	Fretsaw, Hegner Multicut SE-EDU Variable Speed	
MM-FRETSAW4	Fretsaw, Hegner Multicut QK-EDU Quick Variable Speed	

Recommended Extras

MM-FRETSAW1D	Footswitch for Hegner Fretsaw	
--------------	-------------------------------	--

Essential Extras

Extraction is essential when using a fretsaw. We offer a range of extractors to suit all budgets/requirements.

[Centralised Vac Extraction System, see page 186.](#)

CUSTOM-CVAC	Centralised Vac Extraction System	
MM-FRETSAW1B	Connection Kit: Centralised Dust Extraction System	

[Fixed Local Extraction System, see page 188.](#)

MM-EXTRACT101P	TS101 Underbench Extractor with attachment fittings for Hegner Fretsaw (<i>manual switch</i>)	
MM-SWITCH9	Auto Switch Box	

[Mobile Extraction System, see page 188.](#)

MM-EXTRACT104PS	TS104 Mobile Extractor (1ph) with attachment fittings for small machine (<i>manual switch</i>)	
MM-SWITCH9	Auto Switch Box	

[See also fretsaw stands with extractors, page 153.](#)

TechSoft Hegner Fretsaw Stands



MM-FRETSAW19

This unit includes the stand, a Multicut 1-EDU fretsaw, an auto-switching extraction unit and a footswitch. Auto-switching ensures the extraction runs whenever material is being cut. Also available without the saw for schools needing a convenient solution to bring existing machinery up to current H&S regulations, or for those who wish to purchase one of the other Hegner models.

Specification	
Table Height:	840mm (adjustable)
Dimensions:	750(W) x 750(D) x 840(H)mm
Power Requirements:	240V 13A, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return & Collect

Prices £*		*See Pricing Information on page 2
MM-FRETSAW19	TechSoft Fretsaw Workstation 750 x 750 x 840mm (adjustable), c/w 1 Hegner Multicut EDU-1 saw, auto-switching Mobile Extractor and Footswitch	
MM-EXTRACT104P2	TechSoft Fretsaw Workstation 750 x 750 x 840mm. Excluding Fretsaw but complete with auto-switching Mobile Extractor and Footswitch.	

Other Fretsaw Stands

These provide a stable base for safe working and a flexible solution for workshop layouts.



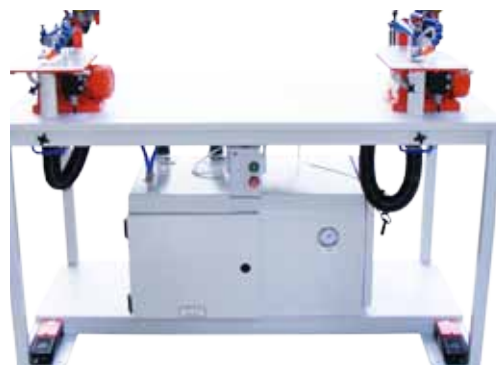
SF-STAND5



SF-STAND7

Prices £*		*See Pricing Information on page 2
SF-STAND5	Machine Bench, 700 x 600mm, adjustable height, MPX Top	
SF-STAND7	Machine Bench, 700 x 600mm, adjustable height, MPX Top with underbench cupboard containing shelf	

Double Hegner Fretsaw Workstation



MM-FRETSAW3

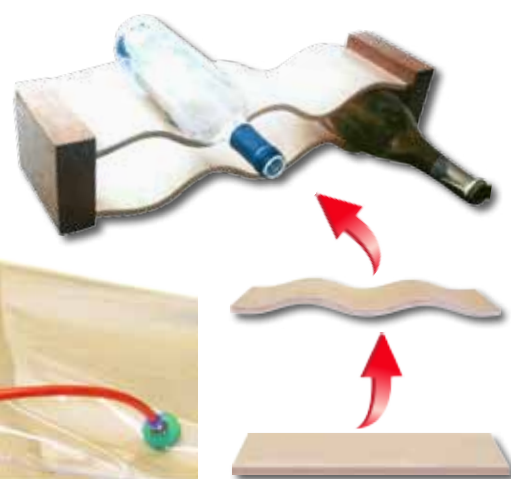
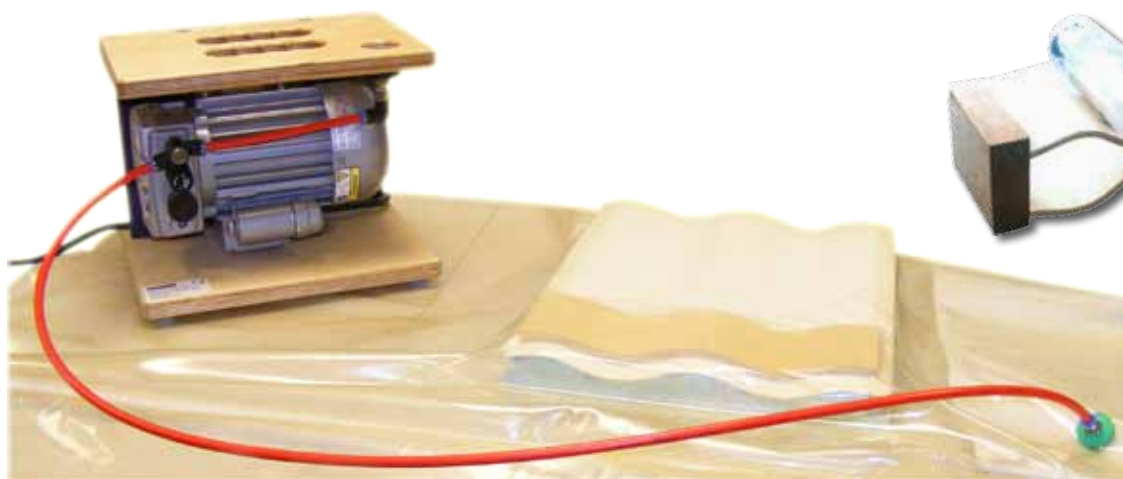
This workstation provides two Multicut 1-EDU fretsaws on a robust unit for permanent siting. Each saw has its own footswitch and the on-board extraction unit runs when either is used.

Specification	
Table Height:	805mm
Dimensions:	1500(W) x 800(D) x 805(H)mm
Power Requirements:	240V 13A, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return & Collect

Prices £*		*See Pricing Information on page 2
MM-FRETSAW3	Double Hegner Fretsaw Workstation (Includes 2 Multicut 1 - EDU fretsaws, auto extraction system & 2 footswitches)	
MMP-EXT-FSBAG10	10 Replacement Bags for Extractor Used in MM-FRETSAW3	
MMP-EXT-FSCART	Replacement Filter Cartridge for Extractor Used in MM-FRETSAW3	

Vacuum Presses

Bagpress



What is a Vacuum Press and How Does it Work?

The simplest type of vacuum press uses a sealable bag and some form of vacuum generator. By placing materials in the bag, sealing it and then sucking out most of the air, a pressure differential is created between the reduced pressure inside the bag and atmosphere on the outside. It is this pressure differential that is used in vacuum pressing.

Most vacuum pumps and generators achieve around 85% vacuum. As atmospheric pressure is about 10 tonnes per square metre, this means that a pressure of 8.5 tonnes per square metre is being exerted on everything inside the bag.

Why buy a Bagpress?

The introduction of vacuum pressing to the education market is one of the most exciting developments in design and technology in recent years. The process of vacuum pressing is very simple yet it produces professional quality results and the potential for its uses are limitless.

Typical school projects might include making chairs, skateboards, salad servers, picture frames and clocks.

The Bagpress system that you buy for your school is not a defeatured, smaller scale, educational version of the equipment but is exactly the same piece of machinery that is sold into a wide variety of industrial manufacturers throughout the world. It allows you to teach the design and prototyping process far more thoroughly than if you are having to use the alternative 'male and female former' method of laminating.

What can a Bagpress do for your students?

Many school lamination projects using the traditional male/female tooling system have failed over the years due to the difficulty in producing accurately matched pairs of moulds. Vacuum pressing overcomes this problem by only requiring a single mould, and this can be cut from a block of styrofoam or extruded polystyrene. This dramatically increases the amount of time a student has available to devote to the product itself and enables much easier fine tuning of the design. This exposes the student to a true prototyping and product development cycle as would happen in industry.

The use of a mould and the repeatability of the process also allows students to consider batch production techniques and the way in which jigs and other tooling can be used to ensure efficiency and accuracy in manufacture.

How easy is it to use?

The range of projects that can be tackled is wide and a Bagpress system can be safely used by every age of student from primary through to graduate level. In many cases we are told that the Bagpress never gets put away as there is always someone who needs to use it at some point during the day.

Student Projects



Sit and Ride Toy

Create stiff, novel forms to meet structural and ergonomic needs.



Occasional Table

Laminated components provide a striking new take on 'traditional' projects.



Mandolin

Decorative inlays are easily and securely incorporated using the Bagpress technique.



Table and Storage

Vacuum pressing inspires new starting points for innovative design solutions.



Guitar

Bagpress provides a simple and reliable tool for bespoke lamination - and much more!



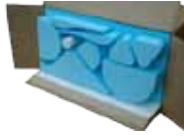
Bird House

Novel design solutions and water resistant materials, Bagpress offers great versatility.

Accessories

Moulds

Bagpress have developed three sets of pre-cut moulds for schools referred to as Nested Mould Kits 1, 2 & 3. They have a selection of moulds for specific projects such as salad servers and chair backs as well as a variety of abstract circular and elliptical curves and wave forms which can be used in the production of a wine rack for example.



The abstract forms ensure that students aren't all tempted to make exactly the same thing. They can study the shapes available and use these to inspire their own imagination and creativity for personal design projects. These mould kits offer an ideal way to 'hit the ground running' when you first purchase a vacuum press system.

Adhesive

At Bagpress they tried and tested more than 15 different types of PVA before choosing the one they now use in their own manufacturing workshop and this is the same product we sell. 99% of all the panels they laminate and veneer are bonded using a high grade D3 (water resistant) PVA adhesive. This type of adhesive has improved significantly in the last 20 years and, with the introduction of specialist materials such as flexible plywood can now be considered as ideal for most veneering and laminating jobs.



Glue Spreader

The Pizzi glue spreader is the only spreader Bagpress use and, once you've used one, you won't want to use anything else.



Materials

Flexible Plywood

The core material used for creating curves and shapes is a flexible plywood which is extremely versatile and bendy until bonded with adhesive and other layers such as birch plywood or veneer when it then holds its rigid form. We supply flexibly in 3, 5 and 8mm thicknesses.



Thin Plywood

We supply birch plywood in 0.8mm thick 1200 x 1200mm sheets and 1.5mm thicknesses in 1525 x 1525mm sheets.



Veneers

We have a mixed pack of coloured and exotic veneers - ideal for all your veneering projects and covering a total area of one square metre.

Prices £*		*See Pricing Information on page 2
Starter Pack		
MM-VPPACK1	Vacuum Press Starter Pack. <i>(Includes 8m³ per hour vacuum press, 1300 x 2500mm bag, footswitch, 180mm Pizzi glue spreader, two 5kg cross linking D3 PVA adhesive, Nested mould kit 1, 1940 x 810 x 118mm mould making foam, two 1525 x 1525 x 1.5mm birch plywood, two 2440 x 1220 x 5mm flexibly, two 2440 x 1220 x 8mm flexibly, 2440 x 1220mm flexiveneer - choose either oak, cherry, ash, sapele or maple, 500ml finishing oil, two 19mm wide self adhesive veneer tape, free veneer offcuts pack)</i>	
Professional Electric Kits		
MM-VACPRESS1	Pro4 Electric Vacuum Press Kit. <i>4m³ per hour, 240V, Dry running pump, 85% vacuum, supplied with 1300x2500mm 300 micron polyurethane bag & carrying frame. Built-in vacuum gauge & footswitch assembly - 8mm tube</i>	
MM-VACPRESS2	Pro8 Electric Vacuum Press Kit. <i>8m³ per hour, 240V, Dry running pump, 85% vacuum, supplied with 1300x2500mm 300 micron polyurethane bag & carrying frame. Built-in vacuum gauge & footswitch assembly - 8mm tube</i>	
Low Cost Electric Kits		
MM-VACPRESS3	Minipress MkII Electric Kit. <i>85% vacuum, supplied with 800 x 1300mm, 200 micron polyurethane bag</i>	
Spare Bags		
MMP-VP-BAG1	1300 x 800mm, 200 micron Seamless Polyurethane Bag Kit (for Minipress MKII). <i>Includes sealing strips, bag connector and storage tube.</i>	
MMP-VP-BAG2	1300 x 2500mm, 300 micron Seamless Polyurethane Bag Kit (for Pro4 and Pro8). <i>Includes sealing strips, bag connector and storage tube.</i>	
Mould Kits		
MT-VP-MKIT1	Nested Mould Kit 1 - <i>eight moulds including salad servers, child's chair, triangular clock and three semicircles</i>	
MT-VP-MKIT2	Nested Mould Kit 2 - <i>seven moulds of abstract shapes including elliptical curves, wave forms and 90° radiused bends</i>	
MT-VP-MKIT3	Nested Mould Kit 3 - <i>two conical moulds, one circular curve and one elliptical</i>	
MT-VP-MKIT12	Mould Kit 1 + Mould Kit 2	
MT-VP-MKIT13	Mould Kit 1 + Mould Kit 3	
MT-VP-MKIT23	Mould Kit 2 + Mould Kit 3	
MT-VP-MKIT123	Mould Kit 1 + Mould Kit 2 + Mould Kit 3	
Adhesives and Accessories		
MT-VP-GLSP1	180mm Hand held Pizzi Glue Spreader with Rubber Roller	
MMP-VP-PVA1	5kg Bagpress D3 PVA - waterproof & creep resistant adhesive - ideal for vacuum pressing	
Flexible Plywood		
TA-PLYFS-3	1220 x 2440 x 3mm Flexible Plywood	
TA-PLYFS-5	1220 x 2440 x 5mm Flexible Plywood	
TA-PLYFS-8	1220 x 2440 x 8mm Flexible Plywood	
Thin Plywood		
TA-PLYBS-08	1220 x 1200 x 0.8mm Birch Plywood	
TA-PLYBS-15	1525 x 1525 x 1.5mm Birch Plywood	
TA-PLYHS-15	1220 x 1220 x 1.5mm Hardwood Plywood	
Coloured Veneers		
TA-VENPK1	Mixed Pack of approx. nine different coloured veneers. <i>Total area 1m². Exact contents may vary.</i>	
TA-VENPK2	Mixed Pack of exotic and unusual veneers. <i>Total area 1m². Exact contents may vary.</i>	
TA-VENPK3	Mixed Pack of 5 flexiveneer sheets measuring 480 x 300mm. <i>Ideal for laser cutting.</i>	

Wood Turning

Wood Turning Lathes

DB 1100 Wood Lathe



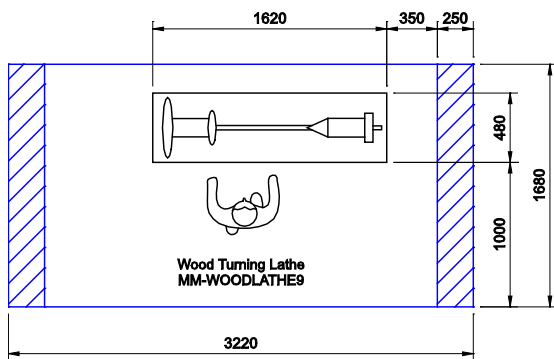
Emergency Foot Stop supplied as standard

A large capacity, versatile, but low cost wood turning lathe. The long between-centres distance means that spindle work over 1m in length can easily be achieved. The ingenious swivelling head allows large bowls to be turned with ease. Powered by a quiet running 750W (1hp) motor, the variable speed drive gives a speed range from 500 to 2000rpm. The machine features a heavy cast iron bed bolted to cast iron legs for vibration free running. The DB 1100 provides an economical solution for everyday woodturning needs.

Specification	
Distance Between Centres:	1100mm
Swing Over Bed:	358mm
Spindle Speeds:	500 - 2000rpm (variable, 10 stages)
Motor:	0.75kW (1hp)
Weight:	92Kg
Dimensions:	1620(W) x 480(D) x 1160(H)mm
Power Requirements:	240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Standard Accessories

300mm tee rest & 150mm face plate.



See page 10 for drawing details.

Prices £*		*See Pricing Information on page 2
MM-WOODLATHE24F	DB 1100 Wood Lathe (includes Emergency Foot Stop)	
MM-SWITCH4	Auto Switch Box - Single	

Essential Extras

Extraction is essential when using a wood lathe. We offer a range of extractors to suit all budgets/requirements. See pages 186, 188 and 189.

AT1628VS & AT2030VS Wood Lathes



MM-WOODLATHE27F

Emergency Foot Stop supplied as standard
MM-WOODLATHE28F

Most quality wood turning lathes on the market are either traditional designs for craft turning, or are aimed at small-scale production. These top quality machines are the best of both worlds, and will be an asset to any modern workshop. Constructed almost entirely from cast iron, the bed is wide and well braced. With heavy duty tool rests and a cast-iron stand, vibration simply isn't an issue. With any turning project, speeds will be changed regularly with each stage of the process – often meaning a laborious belt change assistance from a teacher or technician. These machines are fitted with inverter controlled electronic variable speed with digital readout allowing speed to be fine-tuned while the machine is running. The headstock slides right along to the tailstock end of the bed and swivels through 360°, indexing at fixed intervals locked with a threaded pin. All this provides endless versatility for a wide variety of applications, and offers great improvements in ergonomic comfort for the user compared to traditional machines.

Specifications	MM-WOODLATHE27F	MM-WOODLATHE28F
		1262mm
Swing Over Bed:	406mm	508mm
Spindle Speeds:	50-1,250 & 150-3,750rpm (variable)	60-1,200, 100-2,200, 140-3,700rpm (variable)
Motor:	1.5kW	2.2kW
Weight:	96kg	280kg
Dimensions:	1150(W)x560(D)x550(H) mm	2300(W)x930(D)x1230(H)mm
Power Requirements:	240V 1.5kW, Fused switch-disconnector	240V 2.2kW, Fused switch-disconnector
Warranty:	UK Mainland: 3 Year On-Site Elsewhere: 3 Year Return and Collect	

Prices £*

*See Pricing Information on page 2

MM-WOODLATHE27F	AT1628VS 710mm 1.5kW Wood Lathe (1 phase) inc. Emergency Footstop, Floor Stand, 4 Jaw Lathe Chuck including Dovetail Jaws, Internal & External Safety Jaws, Faceplate dia. 150mm with holes, Screw Chuck	
MM-WOODLATHE27A	460mm Bed Extension for MM-WOODLATHE27F	
MM-WOODLATHE28F	AT2030VS 762/1262mm 2.2kW Wood Lathe (1 Phase) inc. Emergency Footstop, Floor Stand, 4 Jaw Lathe Chuck including Dovetail Jaws, Internal & External Safety Jaws, Faceplate dia. 150mm with holes, Screw Chuck	
MM-WOODLATHE27B	4 Jaw Chuck M33 x 3.5mm for MM-WOODLATHE27F/MM-WOODLATHE28F	

Essential Extras

Extraction is essential when using a wood lathe. We offer a range of extractors to suit all budgets/requirements. See pages 186, 188 and 189.

Graduate Variturn Rebuilt & Variturn 1630



Graduate lathes have long set the standard for professional and educational woodturning. Heavy, cast-iron construction and massive spindle bearings ensure smooth, quiet running and the complete absence of vibration. The addition of infinitely variable speed control from 300 to 2400rpm on these new Variturn models makes this benchmark machine even better. Machines are available as either rebuilt or new. Rebuilt machines are fully reworked to include re-ground beds, new bearings, chrome and paint. They appear 'as new' both cosmetically and mechanically. Brand new machines are built in the UK using European castings and top quality components. All Variturn models are fitted with 1.1kW motors and the latest electronic control system for infinitely variable speed.

Specification	
Distance Between Centres:	762mm or 1066mm or 1371mm
Swing Over Bed:	300mm inboard, 457mm outboard
Spindle Speeds:	300-2400rpm (variable)
Motor:	1.1kW (1.5hp)
Dimensions:	1550/1854/2159(W) x 400(D) x 1150(H)mm
Weight:	228Kg (762 bed length)
Power Requirements:	415V 1.1kW or 240V 1.1kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Standard Accessories

355mm tee rest, 190mm tee rest, 150mm face plate, Revolving centre & 4 pt driving centre.

Prices £*		*See Pricing Information on page 2
MM-WOODLATHE10S	*Graduate Variturn 1630 762mm Wood Lathe with Emergency Footstop, 1 phase	
MM-WOODLATHE19S	*Graduate Variturn Rebuilt 762mm Wood Lathe with Emergency Footstop, 1 phase	
MM-WOODLATHE20S	*Graduate Variturn Rebuilt 1066mm Wood Lathe with Emergency Footstop, 1 phase	
MM-WOODLATHE21S	*Graduate Variturn Rebuilt 1371mm Wood Lathe with Emergency Footstop, 1 phase	
*N.B. For 3 phase versions of Variturn machines add £50		
Original Graduate Classic Rebuilt (0.75kW motor, manual belt change)		
If budgets are tight, this original Graduate may be the answer. Re-built to the same standards as Variturn models but featuring the standard 0.75kW motor and manual belt-change speed control.		
MM-WOODLATHE13	Graduate Classic Rebuilt 762mm Wood Lathe with Emergency Footstop, 1 phase or 3 phase	
MM-WOODLATHE14	Graduate Classic Rebuilt 1066mm Wood Lathe with Emergency Footstop, 1 phase or 3 phase	
Essential Extras		
Extraction is essential when using a wood lathe. We offer a range of extractors to suit all budgets/requirements. See pages 186, 188 and 189.		

Robert Sorby Wood Turning Essentials

Turning Tool Set

Robert Sorby are well known for producing the finest turning tools available and these sets feature polished ash handles and hardened HSS blades. The 6-Piece set with full-sized 410mm+ handles will give young and older users confident control for cutting and scraping work. The additional bowl gouge and wider skew chisel makes this the preferred option as a general-purpose set for schools. The profiles included will provide beginners and more experienced users a versatile tool set for any size of spindle work and general bowl turning. The 5-Piece set has 360mm handles and is economical solution for mainly smaller spindle work.



Prices £*		*See Pricing Information on page 2
MT-WL-TTS1	5 Piece Turning Tool Set (360mm handles). Includes 19mm (3/4") Spindle Roughing Gouge, 10mm (3/8") Spindle Gouge, 12mm (1/2") Flat Skew Chisel, 3mm (1/8") Parting Tool and 12mm (1/2") Scraper.	
MT-WL-TTS2	6 Piece Turning Tool Set (410mm handles). Includes 19mm (3/4") Spindle Roughing Gouge, 10mm (3/8") Spindle Gouge, 10mm (3/8") Bowl Gouge, 19mm (3/4") Oval Skew Chisel, 3mm (1/8") Parting Tool and 12mm (1/2") Round Scraper.	

Robert Sorby Patriot Chuck

This superbly engineered chuck provides a safe and secure way to hold work for turning. Unlike conventional lathe chucks, there are no projecting jaws to cause injury. The work is held by self-centering collets that either grip the outside of a shallow 50mm boss or the inside of a 50mm recess. This boss or recess is turned first and becomes the foot of the bowl or platter. A screw chuck to hold the blank for turning the foot or recess is supplied as a standard accessory. Numerous jaws and accessories for special jobs are also available – please ask for details. The Patriot chuck is supplied with an insert to make it suitable for any lathe available in the UK - when ordering we need to know which lathe you are using.

Prices £*		*See Pricing Information on page 2
MT-WL-CHUCK1	Patriot Chuck with insert including 50mm jaws and Screw Chuck. Please specify which lathe this is required for when ordering.	

Robert Sorby Pro-Edge Sharpening System

Safe and effective woodturning requires perfectly sharp tools and this robust unit will deliver just that. The powerful motor drives a flat belt with just the right grade of abrasive to grind, hone and polish woodturning tools, chisels, plane irons or any edge tool where the keenest of edges is needed. The unit is supplied with two belts for general work and incorporates a patented jig system to set and hold the exact sharpening angle needed.



Standard Accessories

Jigs for Skew Chisels, Gouges and Fingernail Profiles, 2 Aluminium Oxide Belts (120 & 240 grit), Zirconium Belt 60 grit.

Prices £*		*See Pricing Information on page 2
MM-GRINDER8KF	ProEdge Plus sharpening system with Key Switch & Emergency Footstop	

Pillar Drills

Bench and Floor Mounted Drills

Optimum B17 / B23 Pro Bench Drills

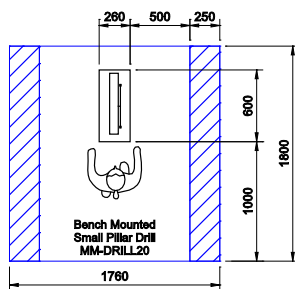


Optimum B17 shown on optional stand with cupboard

Bench top mounted, these versatile and easy to operate pillar drills can be used for the precision drilling of metal, wood and plastics.

N.B. The B17 is suitable for mounting on benches 750-900mm high whereas the B23 is suitable for mounting on standard height tables (max 750mm).

Specifications	B17 Pro (Bench)	B23 Pro (Bench)
Drilling Capacity (steel):	16mm	25mm
Spindle:	2 MT	2 MT
Spindle Speed:	500-2520rpm (5 speed)	200-2440rpm (12 speed)
Spindle Travel:	65mm	80mm
Throat Depth:	152mm	180mm
Column Diameter:	60mm	73mm
Table Size:	235 x 220mm	280 x 250mm
Table Tilt:	-45° to +45°	-45° to +45°
Bench Height:	750-900mm	600-750mm
Motor:	0.5kW (0.67hp)	0.75kW (1hp)
Weight:	39kg	66kg
Dimensions:	260(W)x600(D)x860(H)mm	320(W)x650(D)x1010(H)mm
Power Requirements:	240V 0.5kW Fused switch-disconnector	415V 0.75kW or 240V 0.75kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	



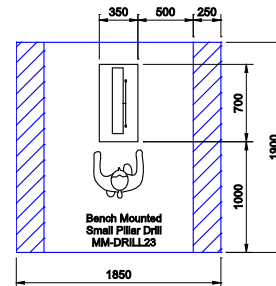
See page 10 for drawing details.

Optimum B26 / B33 Pro Drills



Pedestal floor-mounted, these versatile and easy to operate pillar drills can be used for the precision drilling of metal, wood and plastics. Available in 3 or single phase options.

Specifications	B26 Pro (Floor)	B33 Pro (Floor)
Drilling Capacity (steel):	25mm	30mm
Spindle:	3 MT	4 MT
Spindle Speed:	200-2440rpm (12 speed)	120-1810rpm (9 speed)
Spindle Travel:	85mm	120mm
Throat Depth:	210mm	254mm
Column Diameter:	80mm	92mm
Table Size:	330 x 290mm	475 x 425mm
Table Tilt:	-45° to +45°	-45° to +45°
Motor:	0.75kW (1hp)	1.1kW (1.5hp)
Weight:	82kg	135kg
Dimensions:	350(W)x700(D)x1670(H)mm	480(W)x860(D)x1720(H)mm
Power Requirements:	415V 0.75kW or 240V 0.75kW Fused switch-disconnector	415V 1.1kW or 240V 1.1kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	



See page 10 for drawing details.

Prices £*

*See Pricing Information on page 2

MM-DRILL20FS	Optimum Bench Drill B17 Pro 1ph + Emergency Foot Stop	
MM-DRILL21FS	Optimum Bench Drill B23 Pro 1ph + Emergency Foot Stop	
MM-DRILL21FT	Optimum Bench Drill B23 Pro 3ph + Emergency Foot Stop	
SF-STAND5	Machine Bench, 700 x 600mm, adjustable height, MPX Top (suitable for B17 only)	
SF-STAND7	Machine Bench, 600 x 600mm, adjustable height, MPX Top with underbench cupboard containing shelf (suitable for B17 only)	

Prices £*

*See Pricing Information on page 2

MM-DRILL23FS	Optimum Drill B26 Pro 1ph + Emergency Foot Stop	
MM-DRILL23FT	Optimum Drill B26 Pro 3ph + Emergency Foot Stop	
MM-DRILL22FS	Optimum Drill B33 Pro 1ph + Emergency Foot Stop	
MM-DRILL22FT	Optimum Drill B33 Pro 3ph + Emergency Foot Stop	

Woodpecker Bench Drills



These robust, accurate machines are designed specifically to meet the stringent operation and safety requirements for education. Bench drills are available in two heights – B450 variants use the main work table as the machine base. This sacrifices maximum capacity for a comfortable and safe working height making them ideal for younger pupils. All fitted with keyless chucks and calibrated depth stops as standard.

Specifications	8161B	8201B/8203B
Drilling Capacity (steel):	13mm	16mm
Spindle:	2 MT	2 MT
Spindle Speed:	180-2740rpm (12 speed)	160-3000rpm (16 speed)
Spindle Travel:	80mm	80mm
Throat Depth:	195mm	215mm
Column Diameter:	70mm	80mm
Table Size:	300 x 300mm	335 x 335mm
Table Tilt:	Non-tilting	
Bench Height:	600-750mm (750-900mm for Reduced Height Models)	
Motor:	0.55kW	0.75kW
Weight:	65kg	80kg
Dimensions:	400(W)x720(D)x1065(H)mm (or 720mm reduced height)	450(W)x700(D)x1100(H)mm (or 720mm reduced height)
Power Requirements:	240V 0.55kW Fused switch-disconnector	415V 0.75kW or 240V 0.75kW Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect	

Woodpecker Floor Drills



All Woodpecker drills feature cast iron construction for rigidity and smooth operation, adjustable work tables, keyless chucks and calibrated depth stops. These floor (or pedestal) versions offer maximum versatility for working height and two power/capacity options.

Specifications	8201P/8203P	8323P
Drilling Capacity (steel):	16mm	20mm
Spindle:	2 MT	3 MT
Spindle Speed:	160 - 3000rpm (16 speed)	190 - 2000rpm (12 speed)
Spindle Travel:	80mm	120mm
Throat Depth:	215mm	260mm
Column Diameter:	80mm	92mm
Table Size:	335 x 335mm	475 x 425mm
Table Tilt:	Non-tilting	
Motor:	0.75kW (1hp)	1.1kW (1.5hp)
Weight:	120kg	140kg
Dimensions:	450(W)x700(D)x1700(H)mm	560(W)x890(D)x1700(H)mm
Power Requirements:	415V 0.75kW or 240V 0.75kW Fused switch-disconnector	415V 1.1kW Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect	

Prices £*

*See Pricing Information on page 2

Model	Description	
MM-DRILL30FS	Woodpecker Reduced Height Bench Drill 8161B-450 (1 phase) + Emergency Foot Stop	
MM-DRILL31FS	Woodpecker Reduced Height Bench Drill 8201B-450 (1 phase) + Emergency Foot Stop	
MM-DRILL31FT	Woodpecker Reduced Height Bench Drill 8203B-450 (3 phase) + Emergency Foot Stop	
MM-DRILL32FS	Woodpecker Bench Drill 8161B (1 phase) + Emergency Foot Stop	
MM-DRILL33FS	Woodpecker Bench Drill 8201B (1 phase) + Emergency Foot Stop	
MM-DRILL33FT	Woodpecker Bench Drill 8203B (3 phase) + Emergency Foot Stop	
MT-DR-LGT61	Switched downlight for MM-DRILL30/31/32/33 (fitted at time of purchase)	
MT-DR-CHK61	Keyed Drill Chuck & Arbor for MM-DRILL30/31/32/33	
MT-DR-VICE61	Heavy Duty Drill Vice	

Prices £*

*See Pricing Information on page 2


Model	Description	
MM-DRILL34S	Woodpecker Pedestal Mounted Drill 8201P (1 phase) + Emergency Foot Stop	
MM-DRILL34T	Woodpecker Pedestal Mounted Drill 8203P (3 phase) + Emergency Foot Stop	
MM-DRILL35T	Woodpecker Pedestal Mounted Drill 8323P (3 phase) + Emergency Foot Stop	
MT-DR-LGT61	Switched downlight for MM-DRILL34/35 (fitted at time of purchase)	
MT-DR-CHK61	Keyed Drill Chuck & Arbor for MM-DRILL34/35	
MT-DR-VICE61	Heavy Duty Drill Vice	

Pillar Drills

Bench and Floor Mounted Drills

Meddings Compact Bench & Floor Drills

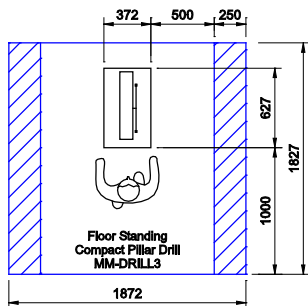


 Emergency Foot Stop supplied as standard (excluding fitting)

Ideal for lighter duty drilling work, the floor machine has table adjustment and the bench machine has a raise/lower head, using the base as the table. Adjustment by rack/pinion mechanism is standard. Both machines are supplied with a 'mushroom' style stop switch for fitting on installation via the standard no-volt/overload release starter. Available in single-phase electrical supply only.

N.B. The Bench height required for the bench drill is 850-900mm.

Specifications	Bench	Floor
Drilling capacity (steel):	13mm	13mm
Spindle:	Fitted chuck	Fitted chuck
Spindle Speed:	500 - 4000rpm (5 speed)	500 - 4000rpm (5 speed)
Spindle Travel:	100mm	100mm
Throat Depth:	194mm	194mm
Column Diameter:	70mm	70mm
Table Size:	235 x 409mm (Base)	235 x 409mm
Table Tilt:	Non-tilting	Non-tilting
Bench Height:	850-900mm	N/A
Motor:	0.25kW (0.34hp)	0.25kW (0.34hp)
Weight:	46kg	61kg
Dimensions:	372(W) x 627(D) x 815(H) mm	372(W) x 627(D) x 1577(H) mm
Power Requirements:	240V 0.25kW, Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site; 8 Years Parts Only Elsewhere: 8 Years Parts Only	




See page 10 for drawing details.

Prices £*		*See Pricing Information on page 2
MM-DRILL3F	Meddings Compact Floor Drill inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	
MM-DRILL3AF	Meddings Compact Bench Drill inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	

Meddings LB1 & LF1 Drills

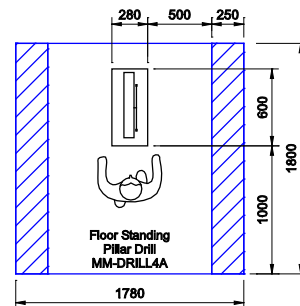


 Emergency Foot Stop supplied as standard with LB1 (excluding fitting)

This floor or bench mounted drill incorporates a built-in low voltage worklight and table adjustment by rack/pinion mechanism. An integrated kick-stop switch is fitted to the front of the floor-mounted machine which is wired into a no-volt/overload release starter. A separate 'mushroom' style stop switch is supplied with the bench-mounted model ready for fitting on installation.

N.B. The Bench height required for the bench drill is 850-900mm.

Specifications	LB1 (Bench)	LF1 (Floor)
Drilling Capacity (steel):	18mm	18mm
Spindle:	2 MT	2 MT
Spindle Speed:	400 - 3600rpm (5 speed)	400 - 3600rpm (5 speed)
Spindle Travel:	75mm	75mm
Throat Depth:	185mm	185mm
Column Diameter:	70mm	70mm
Table Size:	300 x 390mm	300 x 390mm
Table Tilt:	Non-tilting	Non-tilting
Bench Height:	850-900mm	N/A
Motor:	0.45kW (0.6hp)	0.45kW (0.6hp)
Weight:	77kg	133kg
Dimensions:	280(W) x 600(D) x 865(H) mm	280(W) x 600(D) x 1710(H) mm
Power Requirements:	415V 0.45kW or 240V 0.45kW, Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site; 8 Years Parts Only Elsewhere: 8 Years Parts Only	



See page 10 for drawing details.

Prices £*		*See Pricing Information on page 2
MM-DRILL4S	Meddings LF1 Floor Drill (1 phase) inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	
MM-DRILL4T	Meddings LF1 Floor Drill (3 phase) inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	
MM-DRILL4AFS	Meddings LB1 Bench Drill (1 phase) inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	
MM-DRILL4AFT	Meddings LB1 Bench Drill (3 phase) inc. 1-13mm Chuck & Arbor + Emergency Foot Stop	

Schepach Tiger 2500

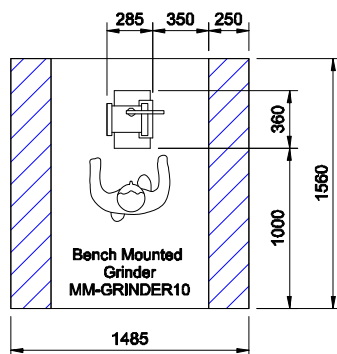


Designed specifically to sharpen and hone a wide range of wood cutting tools, this machine will produce the perfect razor-sharp edges needed for the finest of work. The grinding wheel runs slowly in a water trough to prevent heat build-up and the leather honing wheel removes the burr to leave a perfectly polished cutting edge. The powerful motor is made for continuous operation and is protected from water splashes by an enclosed housing.

Specification	
Disc Bore Size:	12.1mm
No Load Speed:	90rpm
Power Voltage Supply:	230V
Weight:	16.5kg
Dimensions:	370(W) x 380(D) x 420(H)mm
Power Requirements:	240V 2A, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years Return to Base Elsewhere: 2 Years Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



RJH Finishing BEAR 1

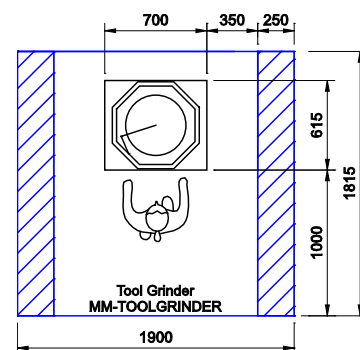


Essential for maintaining edge tools, the BEAR 1 features a controlled 110rpm wheel speed, force-fed recirculatory coolant system and integral oil reservoir with filter. The tool holder accepts up to 60mm wide blades so is ideal for all chisels and most plane irons. The centre swivel arm now has fine adjustment control to ensure that tool edge and grinding wheel remain in perfectly flat contact.

Specification	
Wheel Size:	406 x 32mm
Wheel Speed:	110rpm
Motor:	1 Phase: 0.25kW (0.34hp) 3 Phase: 0.18kW (0.24hp)
Weight:	105kg
Dimensions:	700(W) x 615(D) x 1120(H)mm
Power Requirements:	415V 0.18kW or 240V 0.25kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*

*See Pricing Information on page 2

MM-GRINDER10	Schepach Tiger 2500 10" Grinder c/w universal jig 100	

Prices £*

*See Pricing Information on page 2

MM-TOOLGRINDERS	RJH Finishing Bear 1 Grinder (1 Phase)	
MM-TOOLGRINDERT	RJH Finishing Bear 1 Grinder (3 Phase)	

Grinders

Double Ended Grinders

RJH Finishing Gryphon Grinder

Bench Mounted

Gryphon grinders have a long-established and well-deserved reputation for quality, reliability and longevity. This latest machine features high quality components and precision-balanced wheels for minimal noise and vibration. Adjustable tool rests with positive locking action are standard, and safety is assured with full wheel guarding and heavy duty polycarbonate eye shields.



An off-hand grinder is essential to maintain the condition of both hand and machine tooling, and at least one can be regarded as 'standard equipment' to support one or more workshops. N.B. Once shaped to the correct profile with this machine, the RJH Bear 1 or Scheppach Tiger 2500 (see page 161) should be used to hone fine woodworking tools to a sharp edge.

The machine-only version is for customers who wish to install onto side benching. A foot-stop is provided for mounting as appropriate. LEV is not a requirement if the machine is sited where PPE measures can protect the operator from dust inhalation. (The grinder is likely to be sited in a preparation area for, mainly, technician's use.) In a classroom, machines with LEV are essential.

Specification (Bench Mounted)	
Wheel Size:	200 x 25mm
Wheel Speed:	1 Phase: 2880rpm; 3 Phase: 3450rpm
Centre of Grinding Wheel:	150mm(H)
Motor:	1 Phase: 0.70kW (0.94hp) 3 Phase: 0.85kW (1.14hp)
Weight:	26kg
Dimensions:	557(W) x 333(D) x 360(H)mm
Power Requirements:	415V 0.85kW or 240V 0.70kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Pedestal Mounted

The robust steel pedestal includes the required foot-stop and provides a compact solution where dust control and containment can be dealt with by normal 'housekeeping' and PPE measures.



Specification (Pedestal Mounted)	
Wheel Size:	200 x 25mm
Wheel Speed:	1 Phase: 2880rpm; 3 Phase: 3450rpm
Centre of Grinding Wheel:	915mm(H)
Motor:	1 Phase: 0.70kW (0.94hp) 3 Phase: 0.85kW (1.14hp)
Weight:	50kg
Dimensions:	560(W) x 435(D) x 1150(H)mm
Power Requirements:	415V 0.85kW or 240V 0.70kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

With Integrated Stand/Extractor



This fully-integrated solution provides a high quality Gryphon grinder with everything needed to allow it to be sited almost anywhere given appropriate safety working area (SWA) requirements. The LEV system auto-runs with the grinder and waste is collected in a pull out tray. The steel cabinet includes a positive knee-stop and a shaker handle which is used to shake excess dust off the filter.

Specification (Integrated Stand/Extraction)	
Wheel Size:	200 x 25mm
Wheel Speed:	1 Phase: 2880rpm; 3 Phase: 3450rpm
Centre of Grinding Wheel:	905mm(H)
Extraction Drawer Capacity:	8 litres
Extraction Motor:	0.55kW (0.74hp)
Motor:	1 Phase: 0.70kW (0.94hp) 3 Phase: 0.85kW (1.14hp)
Weight:	79kg
Dimensions:	560(W) x 645(D) x 1115(H)mm
Power Requirements:	415V 1.4kW or 240V 1.3kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Prices £*

*See Pricing Information on page 2

MM-GRINDER1BFT	*RJH Finishing Gryphon Grinder for Bench Mounting (3 phase) + Emergency Foot Stop	
MM-GRINDER1BFS	*RJH Finishing Gryphon Grinder for Bench Mounting (1 phase) + Emergency Foot Stop	
MM-GRINDER1PT	*RJH Finishing Gryphon Grinder with Pedestal (3 phase)	
MM-GRINDER1PS	*RJH Finishing Gryphon Grinder with Pedestal (1 phase)	
MM-GRINDER1T	*RJH Finishing Gryphon Grinder with Extraction (3 phase)	
MM-GRINDER1S	*RJH Finishing Gryphon Grinder with Extraction (1 phase)	

*A fitted Integral DC Braking system is available at an additional cost of (bench and pedestal) or (with extraction). Although not a mandatory requirement, there is an increased demand from various H&S consultants who deem this necessary. This braking system is also available as a retrofit kit for existing machines in the field.

Accessories

MT-RJ-LGT1	Optional fitted LED light. Must be fitted at time of purchase.	
MMP-GR-WH1	Grinding Wheel for Gryphon Grinder, 200 x 25 x 20 - 36 Grit	
MMP-GR-WH2	Grinding Wheel for Gryphon Grinder, 200 x 25 x 20 - 80 Grit	
MT-DRESSER1	Wheel Dresser for Gryphon Grinder	
MT-BF-FILTER1	Dust Extraction Filter Bag for integrated extractor	

RJH Finishing Deer & Antelope Bandfacers

Bench Mounted - Deer



RJH Bandfacers are suitable for wood, acrylic and metal, and have been carefully developed to provide a safe and reliable resource for schools. The machine features a quick-action adjustable table with protractor guide for accuracy. Particular attention has been given to noise reduction, ergonomic design and user-friendly features.

The Deer Bandfacer shares all the technical, operational and ergonomic features of its Antelope cousin but provides a machine-only version for customers to install onto side benching. Extraction will be required via free-standing LEV (see pages 188-190) or connection to a central system (see page 186). A footstop switch is provided for mounting as appropriate.

Specification (Bench Mounted)	
Work Table	278(W) x 226(D) x 300(H)mm
Belt Speed:	6.5m/sec
Belt Width:	150mm
Belt Drive Motor:	1 Phase: 0.75kW (1hp) 3 Phase: 1.5kW (2hp)
Weight:	77kg
Dimensions	565(W) x 615(D) x 580(H)mm
Power Requirements:	415V 1.5kW or 240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Pedestal Mounted - Deer

This pedestal mounted version provides a solution where the bandfacer is to be connected to a suitable ducted extraction system (see pages 186 and 188-190).

The pedestal is supplied with a fully-wired foot-stop.



Specification (Pedestal Mounted)	
Work Table	278(W) x 226(D) x 1050(H)mm
Belt Speed:	6.5m/sec
Belt Width:	150mm
Belt Drive Motor:	1 Phase: 0.75kW (1hp) 3 Phase: 1.5kW (2hp)
Weight:	97kg
Dimensions	540(W) x 615(D) x 1345(H)mm
Power Requirements:	415V 1.5kW or 240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

With Stand/Extractor - Antelope



This fully-integrated solution provides the high-quality Deer bandfacing head on a robust steel base unit. The Antelope is assembled and wired to include everything needed to allow it to be sited almost anywhere given appropriate safety working area (SWA) requirements. The LEV system auto-runs with the bandfacer and waste is collected in a pull out tray. The steel cabinet includes a positive knee-stop and a shaker handle which is used to shake excess dust off the filter.

Specification (Integrated Stand/Extraction)	
Work Table:	278(W) x 226(D) x 1025(H)mm
Belt Speed:	6.5m/sec
Belt Width:	150mm
Belt Drive Motor:	1 Phase: 0.75kW (1hp) 3 Phase: 1.5kW (2hp)
Extraction Drawer Capacity:	8 litres
Extraction Motor:	0.55kW (0.74hp)
Weight:	135kg
Dimensions:	660(W) x 715(D) x 1305(H)mm
Power Requirements:	415V 2.1kW or 240V 1.3kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Prices £*

*See Pricing Information on page 2

MM-BANDFACER1BFT	Deer AN150 V3B Bandfacer for Bench Mounting (3 phase) + Emergency Foot Stop	
MM-BANDFACER1BFS	Deer AN150 V1B Bandfacer for Bench Mounting (1 phase) + Emergency Foot Stop	
MM-BANDFACER1PT	Deer AN150 V3P Bandfacer with Pedestal (3 phase)	
MM-BANDFACER1PS	Deer AN150 V1P Bandfacer with Pedestal (1 phase)	
MM-BANDFACER1T	Antelope AN150 V3COB Bandfacer with Extractor (3 phase)	
MM-BANDFACER1S	Antelope AN150 V1COB Bandfacer with Extractor (1 phase)	

Accessories

MT-RJ-LGT1	Optional fitted LED light. <i>Must be fitted at time of purchase.</i>	
MT-BF-BLT60	60 Grit Belt (1090x150)	
MT-BF-BLT80	80 Grit Belt (1090x150)	
MT-BF-BLT100	100 Grit Belt (1090x150)	
MT-BF-BLT60-10	60 Grit Belt, Pack of 10 (1090x150)	
MT-BF-BLT80-10	80 Grit Belt, Pack of 10 (1090x150)	
MT-BF-BLT100-10	100 Grit Belt, Pack of 10 (1090x150)	
MT-BF-FILTER1	Dust Extraction Filter Bag for integrated extractor	

RJH Finishing Chamois Polisher

Bench Mounted



The Chamois double-ended polisher is a quiet, smooth running machine with a long-standing reputation for reliability and longevity in educational establishments. The spindle is guarded by adjustable steel sleeves and safety is further ensured by steel guards and robust adjustable eye shields. These guards double as dust-capture hoods and have provision for duct connection.

The machine-only version is for customers who wish to install onto side benching. Extraction will be required via free-standing LEV (see pages 188-190). A footstop is provided for mounting as appropriate.

Specification (Bench Mounted)	
Spindle Speed:	1,500rpm
Max Mop Size:	200 x 25mm
Mop Drive Motor:	1 Phase: 0.70kW (0.94hp) 3 phase: 1.25kW (1.7hp)
Centre of Mop	150mm(H)
Weight:	40kg
Dimensions	1000(W) x 325(D) x 290(H)mm
Power Requirements:	415V 1.25kW or 240V 0.7kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Pedestal Mounted

This pedestal mounted version provides a solution where the polisher is to be connected to LEV, see pages 188-190.

The pedestal is supplied with a fully-wired foot-stop.



Specification (Pedestal Mounted)	
Spindle Speed:	1,500rpm
Max Mop Size:	200 x 25mm
Mop Drive Motor:	1 Phase: 0.70kW (0.94hp) 3 phase: 1.25kW (1.7hp)
Centre of Mop	925mm(H)
Weight:	64kg
Dimensions	1000(W) x 520(D) x 1050(H)mm
Power Requirements:	415V 1.25kW or 240V 0.7kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

With Integrated Stand/Extractor

This fully-integrated solution provides the high-quality Chamois polisher on a robust steel base unit. The machine is assembled and wired to make siting and connection as easy as possible. The LEV system auto-runs with the polisher and waste is collected in a pull out tray. The steel cabinet includes a positive knee-stop and a shaker handle which is used to shake excess dust off the filter.



Specification (Integrated Stand/Extraction)	
Spindle Speed:	1,500rpm
Max Mop Size:	200 x 25mm
Mop Drive Motor:	1 Phase: 0.70kW (0.94hp) 3 phase: 1.25kW (1.7hp)
Extraction Motor	0.55kW (0.74hp)
Extraction Drawer Capacity	8 litres
Centre of Mop	925mm(H)
Weight:	93kg
Dimensions	1035(W) x 650(D) x 1180(H)mm
Power Requirements:	415V 1.8kW or 240V 1.3kW, Fused switch-disconnector
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Years Return and Collect

Prices £*		*See Pricing Information on page 2
MM-POLISHER3BFT	PL2001T* Chamois Polisher for Bench Mounting (3 phase) + Emergency Foot Stop	
MM-POLISHER3BFS	PL2001S* Chamois Polisher for Bench Mounting (1 phase) + Emergency Foot Stop	
MM-POLISHER3PT	PL2001TP* Chamois with Pedestal (3 phase)	
MM-POLISHER3PS	PL2001SP* Chamois with Pedestal (1 phase)	
MM-POLISHER3T	PL2001TE* Chamois Polisher with Extractor (3 phase)	
MM-POLISHER3S	PL2001SE* Chamois Polisher with Extractor (1 phase)	

*A fitted Integral DC Braking system is available at an additional cost of (bench and pedestal) or (with extraction). Although not a mandatory requirement, there is an increased demand from various H&S consultants who deem this necessary. This braking system is also available as a retrofit kit for existing machines in the field.

Accessories

MT-RJ-LGT1	Optional fitted LED light. Must be fitted at time of purchase.	
MMP-PO-MP1	Mop, 200 x 25, Stitched for Chamois Polisher	
MMP-PO-MP2	Mop, 200 x 25, Loose for Chamois Polisher	
MMP-PO-PK1	Finishing Kit for Aluminium. Contains 3 mops and 3 polishing compounds	
MMP-PO-PK2	Finishing Kit for Steel & Stainless Steel. Contains 3 mops and 3 polishing compounds.	
MMP-PO-PK3	Finishing Kit for Brass. Contains 2 mops and 2 polishing compounds.	
MMP-PO-PC1	Tripomax Super Polishing Compound (Bar 8" x 2" x 1.3/4")	
MMP-PO-PC2	Abramax Polishing Compound (Bar 8" x 2" x 1.3/4")	
MMP-PO-PC3	Maxfin Polishing Compound (Bar 8" x 2" x 1.3/4")	
MMP-PO-PC4	Chromax Super Polishing Compound (Bar 8" x 2" x 1.3/4")	
MT-BF-FILTER1	Dust Extraction Filter Bag for integrated extractor	

Optimum S131GH / S181G Bandsaws



MM-BANDSAWMETALS

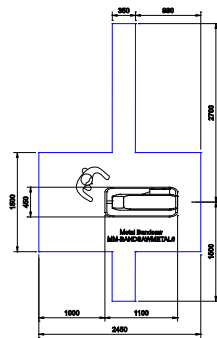
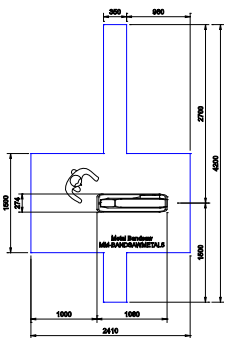


MM-BANDSAWMETAL6S

These sturdy bandsaws feature cast-iron construction and bearing-guided blades for rigidity and smooth running. Blade force is controlled by an adjustable hydraulic cylinder in both cases. Three cutting speeds will allow for rapid and accurate preparation of steel and non-ferrous stock. The lighter S131GH model will be ideal in multi-material workshops for one-off and small batch preparation in lighter materials. Angled cuts are achieved by swivelling the saw arch against a graduated scale. The higher-capacity S181G model is ideal for regular use in an engineering workshop and features an in-built coolant system, geared speed change and angled cuts by adjusting the quick-action vice jaws.

N.B. Work supports (see SF-ROLLERSTAND3 in prices below) must be used for long pieces to stop tipping.

Specification	Optimum S131GH	Optimum S181G
Cutting Capacity:	128mm round 100 x 145mm rectangular	180mm round 180 x 240mm rectangular
Speed:	22, 31 & 55m/min	39, 66 & 82m/min
Motor:	1.1kW (1.75hp)	0.75Kw (1hp)
Weight:	78kg	130kg
Dimensions:	980(W) x 274(D) x 1060(H) mm	1275(W) x 450(D) x 1100(H) mm
Power Requirements:	240V 1.1kW, Fused switch-disconnector	240V 0.75kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	



See page 10 for drawing details.

KV40 Metal Cutting Vertical Bandsaw

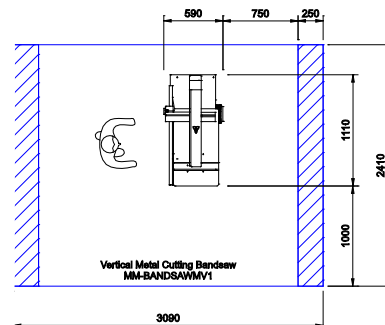


Emergency Foot Stop and Key Switch supplied as standard

A large capacity bandsaw with a powerful 1.5kW motor, this sturdy machine is capable of heavy cuts for prolonged periods. Two speeds, three types of available blade and 410mm throat capacity makes the KV40 a versatile resource for preparing a wide variety of stock - including thicker sheet material. The table inclines for cutting mitred edges and the machine is supplied with a mitre-fence for cross-cutting angles and mitred corners. Strips and repeat widths are quickly obtained by working off the adjustable fence. A useful feature is the built-in shear, welding, grinding and annealing facility for making-up or repairing blades in-house.

N.B. Work supports (see SF-ROLLERSTANDS in prices below) must be used for long pieces to stop tipping.

Specification	
Table Size:	600(W)mm x 500(D)mm
Table Tilt:	0° - 15°
Throat Width:	410mm
Clearance Height:	310mm
Max. Blade Width:	16mm
Motor:	1.5kW (2hp)
Weight:	440kg
Dimensions:	1110(W) x 590(D)mm x 1950(H)mm
Power Requirements:	415V 1.5kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect



See page 10 for drawing details.

Prices £*

*See Pricing Information on page 2

MM-BANDSAWMETALS	Optimum S131GH Metal Bandsaw (1 phase)	
MM-BANDSAWMETAL6T	Optimum S181G Metal Bandsaw (3 Phase)	
SF-ROLLERSTAND3	Height Adjustable Roller Stand (1000 x 440 x 530-800mm)	
Spare Blade (one blade included with machine)		
MT-BM-BL10	10-14 Vari Tooth Blade Bimetal for S131GH	
MT-BM-BL1	5-8 Vari Tooth Blade Bimetal for S181G	
MT-BM-BL2	6-10 Vari Tooth Blade Bimetal for S181G	

Prices £*

*See Pricing Information on page 2

MM-BANDSAWMV1KF	KV40 Metal Cutting Vertical Bandsaw + Keyswitch + Emergency Foot Stop	
SF-ROLLERSTAND5	Height Adjustable Roller Stand (1000 x 440 x 650-950mm)	
Spare Blade (one blade included with machine)		
MT-BM-BL3	6/10 Vari Tooth Spare Blade for MM-BANDSAWM1	
MT-BM-BL5	10/14 Vari Tool Spare Black for MM-BANDSAWM1	

Metal Cut-Off Saws / Metal Lathes

Metal Cut-Off Saws and Metal Lathes

ECS 250 / 315 Metal Cut-Off Saws



Emergency Foot Stop and Key Switch supplied as standard

An ideal solution where preparation of steel and non-ferrous stock is regularly required but space is limited. The ECS 250 produces clean, accurate cuts in heavier bar stock or tube, and has surprising capacity for a machine of this type. A coolant supply system is built-in and the 3ph model has two speeds for greater versatility. The machine is easy to use and features a quick action vice mechanism - ideal for repeat work. Angles and mitred cuts are quickly set up using the swivelling headstock with pre-set detents for 45 and 90 degrees. This is a heavy, precision-built machine for long life and smooth vibration-free running.

N.B. Work supports (see SF-ROLLERSTAND5 in prices below) must be used for long pieces to stop tipping.

Specification	ECS250	ECS315
Blade Diameter:	250mm	315mm
Cut Capacity Solid Rod:	30mm Diameter	50mm Diameter
Cut Capacity Round Tube:	75mm Diameter	100mm Diameter
Cut Capacity Square Tube:	65 x 65mm	82 x 82mm
Cut Capacity Rectangular Tube:	90 x 50mm	110 x 70mm
Motor:	0.75kW (1hp)	1.50kW (2hp)
Motor Speed:	45rpm (1ph), 45/90rpm (3ph) - 2 speed	44/88rpm - 2 speed
Coolant Pump:	90W	
Coolant Tank:	2 Litres	5 Litres
Weight:	131kg	175kg
Dimensions:	960(W) x 940(D) x 1570(H)mm	1020(W) x 990(D) x 1830(H)mm
Power Requirements:	240V 0.75kW or 415V 0.75kW Fused switch-disconnector	415V 1.50kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

Machine Stand, Coolant System, High Speed Blade, Quick Action Vice.

Prices £*		*See Pricing Information on page 2
MM-CIRCSAWM1KFT	ECS 250 Metal Cutting Circular Saw (3 phase) + Keyswitch + Emergency Foot Stop	
MM-CIRCSAWM1KFS	ECS 250 Metal Cutting Circular Saw (1 phase) + Keyswitch + Emergency Foot Stop	
MM-CIRCSAWM2KF	ECS 315 Metal Cutting Circular Saw (3 phase) + Keyswitch + Emergency Foot Stop	
Spare Blades (one blade included with machine)		
MT-BM-BL6	250mm Dia. Spare Blade for MM-CIRCSAWM1	
MT-BM-BL7	315mm Dia. Spare Blade for MM-CIRCSAWM2	
SF-ROLLERSTAND5	Height Adjustable Roller Stand. (1000 x 400 x 650-950mm)	

TU2304V/TU2406V Variable Speed Metal Lathes



MM-METALLATHE44

Emergency Foot Stop supplied as standard



MM-METALLATHE43

Emergency Foot Stop supplied as standard

These light duty lathes will be ideal in a multi-materials workshop where metal-turning needs to be among the many facilities available for students. Several of these would provide a cost-effective, space-saving solution in a training environment where demand is high but space is limited. Compact and generously equipped, they provide all the key capabilities needed for surfacing, facing and screw-cutting in steel and non-ferrous alloys. Both machines include all necessary guards, stops and interlocks to make them suitable for educational use.

Specification	TU2304V	TU2406V
Distance Between Centres:	450mm	550mm
Swing Over Bed:	230mm	250mm
Spindle Speeds:	150-2200rpm	150-2500rpm
Tailstock Taper:	2MT	2MT
Motor:	0.75kW	1.1kW
Weight:	104Kg	125Kg
Dimensions:	960(W) x 580(D) x 510(H)mm	1310(W) x 520(D) x 560(H)mm
Power Requirements:	240V 0.75kW, Fused switch-disconnector	240V 1.1kW, Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

Interlocked Chuck Guard, Leadscrew Guard, Machine Tray, Rear Splash Guard, Change Gear Kit, 3-Jaw Chuck - 100mm, MT2 Steady Centre, MT3 Steady Centre

Prices £*		*See Pricing Information on page 2
MM-METALLATHE44F	TU2304V Variable Speed Metal Lathe (1 phase) 230 x 450mm c/w Emergency Footstop and fitted leadscrew cover	
MM-METALLATHE43F	TU2406V Variable Speed Metal Lathe (1 phase) 250 x 550mm c/w Emergency Footstop and fitted leadscrew cover	
Recommended Tooling Pack This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-LM-PK78	Tooling Pack for MM-METALLATHE43/44. (Includes Quick Change Toolpost; Live Centre; Keyed Drill Chuck and Arbor; Indexable tools 12mm - 60deg RH, 60deg LH, vee, boring + blade-type parting tool)	
MT-LM-TTS50	External Threading Tool 12mm	
Recommended Extras		
MM-METALLATHE43C	2 Axes Digital Read Out fitted to MM-METALLATHE43/44*	
MM-METALLATHE43A	Stand for MM-METALLATHE43/44	

* Must be fitted at time of purchase

Optimum TH3309D & TH3610D Metal Lathes



These heavy duty, well engineered, quality machines will more than meet all the turning needs for Design and Technology work at KS3, A level, and beyond. All machines feature heavily ribbed beds with hardened and ground vee guide ways. They are supplied with power feed on both axes, coolant and a large brake/stop pedal.

The education versions of these machines, supplied by TechSoft, include all necessary guards, stops and interlocks to make them suitable for educational use.

Specification	TH3309D	TH3610D
Distance Between Centres:	910mm	1000mm
Swing Over Bed:	329mm	356mm
Digital Readout:	2 Axis	
Coolant System:	Inbuilt	
Spindle Speeds:	60-2000rpm	70-2000rpm
Tailstock Taper:	3MT	3MT
Powerfeed:	X and Z axis	
Motor:	1.5kW (2hp)	1.5kW (2hp)
Weight:	495kg	710kg
Dimensions:	1685(W) x 745(D) x 1590(H)mm	1930(W) x 725(D) x 1620(H)mm
Power Requirements:	415V 1.5kW Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

2 Axis Digital Readout, In-built Coolant, Machine Light, Interlocked Chuck Guard, Leadscrew Guard, 3-Jaw Chuck, 4-Jaw Chuck, 250mm Faceplate, Fixed Steady, Travelling Steady, MT3 Dead Centre, MT5-MT3 Sleeve.

Prices £*		*See Pricing Information on page 2
MM-METALLATHE15T	Optimum Lathe TH3309D (3 phase)	
MM-METALLATHE16T	Optimum Lathe TH3610D (3 phase)	
Recommended Tooling Pack		
This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-LM-PK76	Tooling Pack for MM-METALLATHE15/16 (Includes quick change toolpost with 4 standard, 1 vee and 1 Morse taper tool holder, live centre, keyed drill chuck and arbor, indexable tools 12mm - 60 deg RH, 60 deg LH, vee, boring + blade-type parting tool)	
MT-LM-TTS50	External Threading Tool 12mm	
Recommended Extras		
MT-LM-TTA22	Taper Turning Attachment for TH3309D*	
MT-LM-TTA21	Taper Turning Attachment for TH3610D*	

* Must be fitted at time of purchase

Optimum TH4010D Metal Lathe



This industrial-quality, large capacity lathe is designed for heavy use and is ideal for colleges and schools with an Engineering specialism where precision work with high throughput is a daily requirement. The lathe is equipped with a powerful two stage 1.5/2.4 kW motor and a robust mechanical gearbox offering a stepped speed range from 45 to 1800rpm. The TH4010D is supplied with power feed on both axes, coolant and a large brake/stop pedal.

The education versions of these machines, supplied by TechSoft, include all necessary guards, stops and interlocks to make them suitable for educational use.

Specification	TH4010D	
Distance Between Centres:	1000mm	
Swing Over Bed:	410mm	
Digital Readout:	2 Axis	
Coolant System:	Inbuilt	
Spindle Speed:	45-1800rpm	
Tailstock Taper:	3MT	3MT
Powerfeed:	X and Z Axis	
Motor:	2.4kW (3.2hp)	
Weight:	990kg	
Dimensions:	1920(W) x 740(D) x 1555(H)mm	
Power Requirements:	415V 2.4kW, Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

2 Axis Digital Readout, In-built Coolant, Machine Light, Interlocked Chuck Guard, Leadscrew Guard, 3-Jaw Chuck, 4-Jaw Chuck, 250mm Faceplate, Fixed Steady, Travelling Steady, MT3 Dead Centre, MT5-MT3 Sleeve.

Prices £*		*See Pricing Information on page 2
MM-METALLATHE42	Optimum Lathe TH4010D (3 phase)	
Recommended Tooling Pack		
This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-LM-PK77	Tooling Pack for MM-METALLATHE42 (Includes quick change toolpost with 4 standard, 1 vee and 1 Morse taper tool holder, live centre, keyed drill chuck and arbor, indexable tools 16mm - 60 deg RH, 60 deg LH, vee, boring + blade-type parting tool)	
MT-LM-TTS51	External Threading Tool 16mm	
Recommended Extras		
MT-LM-TTA23	Taper Turning Attachment for TH4010D*	

* Must be fitted at time of purchase

Optimum MH 20V/22V/22VD Milling/Drilling



A well engineered range of compact manual milling machines for bench-mounting (or floor-standing models with the optional base cabinets). These are all sturdy machines, capable of heavy cuts to a high precision. The MV20V is a compact machine with an MT2 spindle and electronic speed control as standard. The MH22V has a significantly larger machining envelope and a BT20 spindle for increased rigidity. The MH22VD adds a full digital readout on all three axes. These machines are an ideal choice for most schools.

The education versions of these machines, supplied by TechSoft, include all necessary guards, stops and interlocks to make them suitable for educational use.

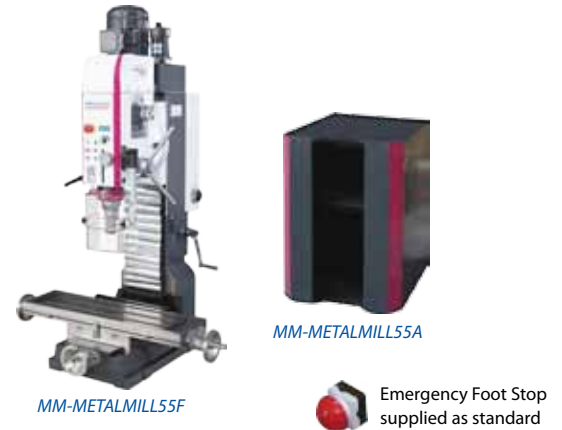
Specification	MH20V	MH22V/VD
Axis Travel:	210 x 175 x 210mm	480 x 175 x 370mm
Table Size:	500 x 180mm	700 x 180mm
Spindle Speeds:	100 - 3000rpm	90 - 3000rpm
Spindle Taper:	2MT	BT20
Motor:	0.75kW	0.95kW
Weight:	94kg	120kg
Dimensions:	650(W) x 750(D) x 820(H)mm	850(W) x 750(D) x 950(H)mm
Power Requirements:	240V 0.75kW Fused switch-disconnector	240V 0.95kW Fused switch-disconnector
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

Digital Quill Readout, Interlocked Cutter Guard, Work Table Illumination

Prices £*		*See Pricing Information on page 2
MM-METALMILL50F	Optimum MH20V Vario Bench Milling/Drilling Machine (1 phase) + Emergency Footstop	
MM-METALMILL51F	Optimum MH22V Variable Speed Bench Milling/Drilling Machine (1 phase) + Emergency Footstop	
MM-METALMILL52F	Optimum MH22VD Variable Speed Bench Milling/Drilling Machine with Dro (1 phase) + Emergency Footstop	
MM-METALMILL50A	Stand for MM-METALMILL50/51/52 c/w Swarf Tray	
Recommended Tooling Pack: This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-MM-PK71	Tooling Pack for MM-METALMILL50 (MH20) (Includes swivel base 100mm milling vice, collet set ER-25 2MT with 15 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	
MT-MM-PK72	Tooling Pack for MM-METALMILL51/52 (MH22V/MH22VD) (Includes swivel base 100mm milling vice, adaptor BT20 to 2MT, collet set ER-25 2MT with 15 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	

Optimum MH35V/50V Milling/Drilling Machine



These are powerful, rigid machines capable of taking heavy cuts to a high precision. Both machines have an exceptional speed range of 50 - 3,260rpm using a gearbox and a variable speed motor, ideal for operations such as tapping. The MH35V has a rigid BT30 taper and a 1.5kW motor. The MH50V has a larger machining envelope combined with a BT40 taper and a 2.2kW motor. Other features include a digital spindle speed readout and a pivoting head. These machines are ideal for schools wishing to have a versatile machine with the capability to do demanding, heavy duty, yet precision work.

The education versions of these machines, supplied by TechSoft, include all necessary guards, stops and interlocks to make them suitable for educational use.

Specification	MH35V	MH50V
Axis Travel:	450 x 200 x 460mm	520 x 260 x 465mm
Table Size:	750 x 210mm	850 x 240mm
Spindle Speeds:	220 - 3100rpm	50 - 3260rpm
Spindle Taper:	BT30	BT40
Motor:	1.5kW	2.2kW
Weight:	316kg	525kg
Dimensions:	1030(W) x 850(D) x 1340(H)mm	1020(W) x 1210(D) x 1620(H)mm
Power Requirements:	415v 1.5Kw Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	


Standard Accessories:

Digital Quill Readout, Interlocked Cutter Guard

Prices £*		*See Pricing Information on page 2
MM-METALMILL54F	Optimum MH35V Vario Bench Milling/Drilling Machine (3 phase) + Emergency Footstop	
MM-METALMILL54A	Stand for MM-METALMILL54	
MM-METALMILL55F	Optimum MH50V Vario Bench Milling/Drilling Machine (3 phase) + Emergency Footstop	
MM-METALMILL55A	Stand for MM-METALMILL55	
Recommended Tooling Pack: This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-MM-PK74	Tooling Pack for MM-METALMILL54 (MH35V) (Includes swivel base 100mm milling vice, collet set ER-32 BT30 with 18 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	
MT-MM-PK75	Tooling Pack for MM-METALMILL55 (MH50V) (Includes swivel base 100mm milling vice, collet set ER-32 BT40 with 18 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	

ETM-2VS/3VS Turret Mill



 Emergency Foot Stop supplied as standard

This industry standard style of full size turret mill comes complete with all the bells and whistles. A huge table size, 3 axis digital readout, power feed to ALL three axes, 3hp variable speed head, power feed to the quill, built-in coolant, etc. With all this capability, there is no compromise on quality as the machine is precision manufactured using meehanite castings and has hardened bed ways for much longer service life. This outstanding vertical milling machine will undoubtedly provide everything that a school or college could reasonably ask for at a very competitive price.

The education versions of these machines, supplied by TechSoft, include all necessary guards, stops and interlocks to make them suitable for educational use.

Specification	ETM-2VS	ETM-3VS
Axis Travel:	840 x 305 x 350mm	950 x 400 x 400mm
Table Size:	1246 x 230mm	1370 x 254mm
Spindle Speeds:	60-4,200rpm (variable)	70-4200rpm (variable)
Spindle Taper:	R8	
Digital Readout:	3 Axis	
Coolant System	Inbuilt	
Motor:	2.2kW (3hp)	
Weight:	1,060kg	1,400kg
Dimensions:	1400(W) x 1470(D) x 2030(H) mm	1800(W) x 2010(D) x 2170(H)mm
Power Requirements:	415V 2.2kW, Fused switch-disconnector	
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	

Standard Accessories:

3 Axis Digital Readout, In-built Coolant System, X, Y Axis Power Feed, Z Axis Power Feed (ETM-2VS), Electric Rise and Fall on Z Axis (ETM-3VS), Interlocked Cutter Guard, One Shot Central Lubrication System, Machine Light

Prices £*		*See Pricing Information on page 2
MM-METALMILL12F	ETM-2VS Variable Speed Turret Mill (3 phase) + Emergency Footstop	
MM-METALMILL25F	ETM-3VS Variable Speed Turret Mill (3 phase) + Emergency Footstop	
Recommended Tooling Pack		
This Tooling Pack provides a useful selection of tools and accessories to "get you going".		
MT-MM-PK77	Tooling Pack for MM-METALMILL12/25 (ETM-2VS/3VS). (Includes swivel base 150mm machine vice, collet set ER-32 R8 with 6 collets, set of 10 end mills and 10 slot drills, keyed drill chuck and arbor)	

Opti SAR 1000



MM-METALSHEET7



MM-METALSHEET5

This sturdy multi-function machine features all steel construction with high-grade steel shearing blades for clean, burr-free edges. Sheet metal is folded neatly using a 7-segment bar that allows adjacent edges to meet. The fully adjustable three-roller system means cylindrical forms are easy to create and gives reliable repeat accuracy. Adjustable stops, a large working table and an extendable support arm for long work make this versatile tool a joy to use.

Specifications	
Rolling	
Maximum Material Width:	1016mm
Minimum Roll Diameter:	42mm
Maximum Roll Diameter:	Unlimited
Max. Thickness - Steel	1mm
Max. Thickness - StainlessSteel	1mm
Max. Thickness - Alu./Copper	2mm
Max. Thickness - Brass	1mm
Folding	
Maximum Material Width:	1016mm
Maximum Plate Thickness:	2.5mm
Max. Thickness - Steel:	1mm
Max. Thickness - Alu./Copper:	2mm
No. of Removable Segments:	7
Cutting	
Maximum Material Width:	1016mm
Max. Thickness - Steel:	1mm
Max. Thickness - Alu./Copper	1mm
Dimensions and Weight	
Weight:	280kg
Dimensions:	1340(W) x 460(D) x 620(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-METALSHEET7	Opti SAR 1000 Sheet Metal Worker (3 in 1 machine - guillotine, fold and roll)	
MM-METALSHEET5	Stand for Opti SAR 1000	

Metal Working Machines

Guillotines and Box Folders

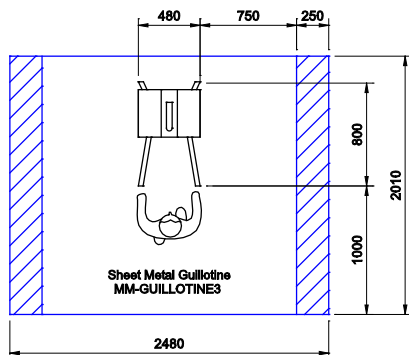
Gabro 2M2/3M2 Guillotines



Conventional guillotines have a scissor action which distorts at least one of the cut edges, but the Gabro designed guillotines cut out a thin strip of metal leaving both edges undistorted and free from sharp burrs. The Gabro guillotines also work much better than a conventional guillotine for a range of other materials such as plastic sheet, hardboard and thin MDF, laminates, etc. They come complete with cutting guides, angle guide and backstop for easy setup and for repetition work. Available as either bench mounted or with floor stands, there are two model sizes available, the 2M2 and the 3M2. The Gabro guillotines are ideal for educational use.

N.B. For safety a locking kit must be fitted when not in use (available below).

Specifications	2M2	3M2
Max Capacity Mild Steel: Non Ferrous:	1.6mm 3.2mm	3.2mm 4.0mm
Blade Thickness:	3.3mm	4.5mm
Max. Cut per Stroke:	70mm	108mm
Table Size:	480 x 370mm	860 x 560mm
Weight Machine Only: On Stand:	12kg 21kg	46kg 67kg
Dimensions Machine Only: On Stand:	480(W) x 370(D) x 202-809(H)mm 480(W) x 810(D) x 1012-1619(H)mm	860(W) x 560(D) x 230-1140(H)mm 890(W) x 970(D) x 1040-1950(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	



See page 10 for drawing details.

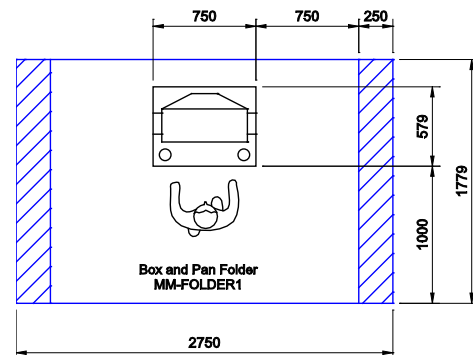
Prices £*		*See Pricing Information on page 2
MM-GUILLOTINE3	Gabro Model 2M2 Guillotine	
MM-GUILLOTINE3A	Stand for Gabro 2M2 Guillotine	
MM-GUILLOTINE1	Gabro Model 3M2 Guillotine	
MM-GUILLOTINE1A	Stand for Gabro 3M2 Guillotine	
MT-MS-SAF2	Safety Locking Kit for Guillotines	

Gabro BF620-2/BF1000 Box Folders



Gabro folders are extremely versatile machines - not only do they tackle straight forward bends with ease, but they can also fold up trays, boxes, pans, lids, etc. It is even possible to fold up boxes and pans with sloped sides. The machines use a clamp bar system and brackets, and channel sections can be bent right around the bar to form tubes. These are well thought out machines, ideal for all sheet metalwork, and ideal for educational use. The BF620-2 can be bench or stand mounted, the BF 1000 comes complete with stand.

Specification	BF 620-2	BF 1000
Max Length of Bend 1.6 Steel: 2.0 Steel: 3.2 Steel:	620mm 300mm 100mm	1000mm 500mm 100mm
Max. Box Size:	250 x 250 x 180mm	1000 x 570 x 215mm
Weight Machine Only: With Stand:	95kg 109kg	Not Applicable 143kg
Dimensions Machine Only: With Stand:	750(W) x 579(D) x 546(H)mm 750(W) x 579(D) x 1283(H)mm	Not Applicable 1340(W) x 700(D) x 1400(H)mm
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	



See page 10 for drawing details.

Prices £*		*See Pricing Information on page 2
MM-FOLDER1	Gabro BF620-2 Box and Pan Folder	
MM-FOLDER1A	Floor Stand & Tray for Gabro BF620-2	
MM-FOLDER3	Gabro BF1000 Box and Pan Folder (includes stand)	

User Friendly, Low Cost, Low Temperature Casting



What is the LT1?

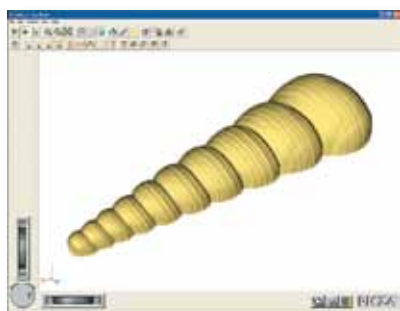
The LT1 Low Temperature Casting System is a cost effective and safe method to cast Lead Free Metal and MCF Low Melting Point Alloy in a standard classroom environment.

Why Casting?

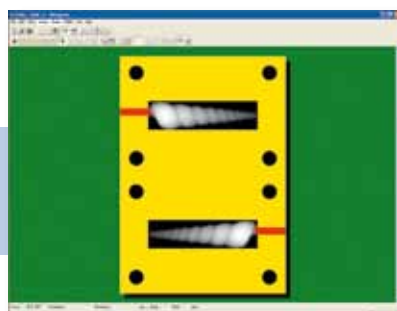
Creating a product from a molten material is a magical process. However, due to a lack of hot metal facilities, a lack of expertise, and or concerns over Health and Safety, many teachers are put off incorporating it into their lessons. Flamefast have always been at the forefront of hot metal equipment and so it should be no surprise that they have created a product that answers this issue.

How does it work?

The LT1 is simple, easy and safe to use. It only requires a standard 240V 13A socket and does not need any extraction. The Lead Free Metal (usually Pewter) is added to the internal melting pot through a swivel lid, on top of the unit. Once the LT1 has been switched on it only takes about 15 minutes to get up to temperature, whilst the unique cooling system keeps the entire case cold to touch. Place the mould into the special pouring trough and insert it into the unit so that the approach hole of the mould is under the pouring spout. Gently depress the pouring lever until the approach hole is full of metal and then carefully remove the pouring trough. When the metal in the approach hole has visibly set, the mould can be removed from the pouring trough, and after a couple of minutes the two halves of the mould can be separated.



Shell scanned on a RotoCAMM MDX-40AE



Mould designed in 3D Engrave



Mould previewed in Virtual Modeler

How do I create a mould?

With CAD/CAM, students have the ability to design and manufacture accurate and detailed products. Whether the mould is designed with 2D Design, 3D Engrave, SolidWorks, etc., your pupils can produce either simple or complex designs. Once designed the mould can be machined on any of TechSoft's miller/routers. Moulds can be machined in a variety of materials, but we have found that Jelutong and MDF offer a good finish at a reasonable price. Jelutong does however have one great advantage over MDF in that it machines in a fraction of the time. When CAD/CAM and casting are put together a whole new world of designing and making is opened.

Specification

Weight:	10kg (approx.)
Dimensions:	242(W) x 280(D) x 300(H)mm
Max. Mould Size: (using mould holding device*)	100 x 100 x 30mm *Larger sizes can be achieved without the use of the mould holding device
Crucible capacity:	2.3kg

What's Included

Accessories

Supplied with 1kg (approx.) of lead free pewter.

Warranty

UK Mainland & Ireland:	1 Year Return to Base
Elsewhere:	1 Year Return and Collect

Prices £*

*See Pricing Information on page 2

LT1 - Low Temperature Casting System

TM-LT1	Low Temperature Casting System	
---------------	--------------------------------	--

Casting Accessories

TMP-LT1-MC	Mould Carrier	
TMP-LT1-MCC	Mould Clip Spring	

Casting Materials

TA-PEWTER	1kg Lead Free Pewter (245°C approx.)	
TA-ALLOY	1kg Low Melting Point Alloy (135°C approx.)	

Jelutong

TA-JELU-50	Pack of 50 blocks (100 x 70 x 15mm)	
-------------------	-------------------------------------	--

Heat Treatment

Flamefast Brazing Hearths / Chip Forges

Flamefast Brazing Hearth



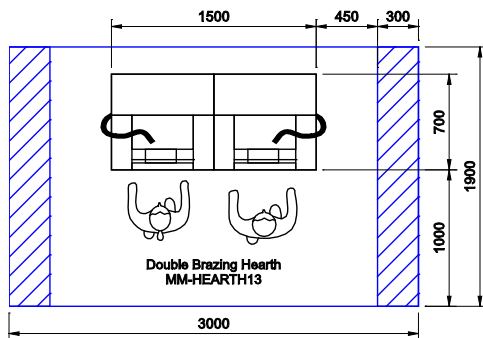
DS400 Single

Shown with extraction canopy (supplied separately).

DS400D Double

DS400 and DS400D brazing hearths feature large 0.4 square metre refractory bases with insulated sides to prevent flame spillage. Both models use the same whisper quiet integral fan unit and feature comprehensive interlocking to prevent flaring or gas leakage in the event of power failure. Each hearth is supplied with an RF80 brazing torch capable of delivering up to 80,000 BTU. Torches have electronic ignition and single hand wheel control for adjusting the flame size whilst maintaining a consistent flame pattern. Fine-flame RF10 Jewellery torches can be supplied in addition to, or instead of, the general purpose RF80 model. The brazing hearths are based on well-proven Flamefast technology and have a well-deserved reputation for low-maintenance, safety and reliability.

Requires additional Heat Treatment Extraction.



See page 10 for drawing details.

Specification	Single	Double
Gas Type:	Natural Gas, Propane or Butane	
Dimensions:	730(W) x 700(D) x 1800(H) mm (with canopy) 730(W) x 700(D) x 1192(H) mm (without canopy)	1500(W) x 700(D) x 1800(H) mm (with canopy) 1500(W) x 700(D) x 1192(H) mm (without canopy)
Weight:	112kg	215kg
Power Requirements:	240V 1A, Fused switch-disconnector (metal clad)	

Flamefast Brazing Hearth/Chip Forge



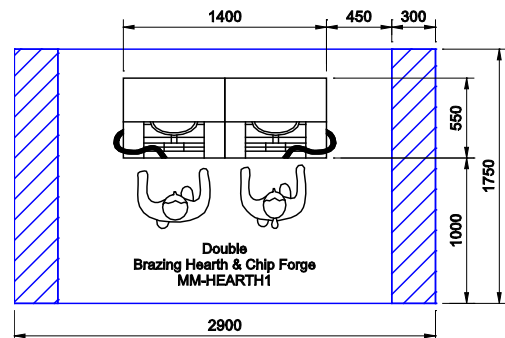
DS430S Single

Shown with extraction canopy (supplied separately).

DS430D Double

At the heart of each unit is a 340mm diameter forge bowl which uses ceramic chip technology to virtually eliminate surface scale-formation on metals. The maximum 1,500°C working temperature can be achieved within 15 minutes of lighting – sufficient for hot working ferrous metal bar up to 50mm diameter. Both single and double units employ the same whisper quiet integral fan and can be fuelled by natural or LPG bottled gas. Both gas and air supply are interlocked to prevent flaring or gas leakage. Alongside the forge unit are one (single) or two (double) refractory surfaces for brazing. Each is provided with an RF80 brazing torch featuring electronic ignition and single wheel control for flame adjustment. Fine-flame RF10 Jewellery torches can be supplied in addition to, or instead of, the general purpose RF80 model.

Requires additional Heat Treatment Extraction.



See page 10 for drawing details.

Specification	Single	Double
Gas Type:	Natural Gas, Propane or Butane	
Dimensions:	1040(W) x 550(D) x 1800(H) mm (with canopy) 1040(W) x 550(D) x 1080(H) mm (without canopy)	1400(W) x 550(D) x 1800(H) mm (with canopy) 1400(W) x 550(D) x 1080(H) mm (without canopy)
Weight:	100kg	133kg
Power Requirements:	240V 1A, Fused switch-disconnector (metal clad)	

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

Flamefast Chip Forge

This unit features ceramic chip technology to virtually eliminate scale-formation on metals. The maximum 1,500°C working temperature can be achieved within 15 minutes of lighting – sufficient for hot working ferrous metal bar up to 50mm diameter. Air supply is by a whisper quiet integral fan, fuel can be natural or LPG bottled gas. Both gas and air supply are interlocked to prevent flaring or gas leakage.

Requires additional Heat Treatment Extraction.

DS430A Shown with extraction canopy (supplied separately).



Specification	
Gas Type:	Natural Gas, Propane or Butane
Dimensions:	720(W) x 560(D) x 1800(H)mm 720(W) x 560(D) x 1080(H)mm (without extraction canopy)
Weight:	133kg
Power Requirements:	240V 1A, Fused switch-disconnector (metal clad)

Flamefast Crucible Furnace



CM450PB

The CM450PB features a tilting crucible which, in most circumstances, will not need lifting when pouring. For larger moulding boxes, a lifting frame is available. This lifts the whole assembly and thus preserves protection to and from the white hot crucible. The furnace is usually placed on a Flamefast Raised Sand Tray which removes the need for a casting pit and provides a safer, more convenient working height for the operator.

Requires additional Heat Treatment Extraction.

Specification	
Gas Type:	Natural Gas, Propane or Butane
Crucible Capacity:	Al 2.9kg Cu/Zn 10kg
Dimensions:	630(W) x 330(D) x 330(H) mm
Weight:	28kg
Power Requirements:	240V 2A, Fused switch-disconnector (metal clad)

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

Flamefast Moulding Bench

The Flamefast Moulding Bench is a robust unit designed to store up to 200kg of moulding sand and has many clever features to prevent sand spillage during moulding operations. Galvanised steel construction provides complete stability. The overall design and a tough stove enamelled finish, matches and complements other Flamefast gas equipment. The two part lid covers the bench when not in use and doubles as a store for moulding tools.



Specification	
Dimensions:	1210(W) x 570(D) x 765(H) mm

Flamefast Welding Bench



This welding bench is ideal for the manual welding requirements in the school or technical college workshop. The 6mm steel surface is provided with pre-cut holes for mounting jigs, fixtures and clamps (not included), making accurate positioning of the workpiece a hassle free affair. Options include a lockable drawer for storage of tools and consumables, side rack for torches and accessories, and bolt on side shelf with ample space for most types of welding equipment.

Requires additional Heat Treatment Extraction.

Specification	
Dimensions:	1120(W) x 600(D) x 850(H) mm
Weight:	79kg

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

Heat Treatment

HME Brazing Hearths / Chip Forges

HME Brazing Hearth



Single



Double (shown with extraction canopy. Supplied separately).

These single and two-position brazing hearths feature a robust single plinth design and clean lines for an attractive, contemporary appearance. The quiet, single blower unit supplies air to one or both torches. The torches have an elegant pistol-grip design and a single control wheel for the air/gas supply. This ensures close control and a consistent flame pattern for all flame sizes. The torches are auto-igniting and have a unique feature that checks for gas supply integrity before enabling the pre-ignition device. Both gas and air systems are interlocked to prevent flaring or leakage in the event of power failure. Ceramic back and side panels will withstand prolonged flame impingement, restrict flame spillage and preserve the appearance of the cabinets.

N.B. Requires additional Heat Treatment Extraction.

Specification	Single	Double
Gas Type:	Natural Gas, Propane or Butane	
Dimensions:	710(W) x 570(D) x 1660(H) mm (with canopy) 710(W) x 570(D) x 1290(H) mm (without canopy)	1400(W) x 570(D) x 1660(H) mm (with canopy) 1400(W) x 570(D) x 1290(H) mm (without canopy)
Weight:	108kg	185kg
Power Requirements:	415V 2A or 240V 2A Fused switch-disconnector (metal clad)	

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

HME Brazing Hearth/Chip Forge



Single



Double (shown with extraction canopy. Supplied separately).

Both single and double units feature an advanced, whisper-quiet blower unit and HME's distinctive single plinth design. The double unit with two independent brazing hearths and a central forge will probably be all that most schools and colleges will need. The single unit is particularly suitable where space is limited. It provides a generous forge area with the capacity to heat 50mm steel bar to 1,500°C – sufficient for brazing and forging. In addition, a single torch is provided for occasional use when the forge bed will double as a brazing hearth. Torches are as supplied with HME's brazing hearths and feature auto-ignition and gas integrity check for the pre-ignition device. This safety feature is shared with the main forge burner. All air and gas systems are interlocked to prevent flaring or leakage in the event of power failure. Alumina-chip technology for the forge minimises surface-scale formation.

N.B. Requires additional Heat Treatment Extraction.

Specification	Single	Double
Gas Type:	Natural Gas, Propane or Butane	
Dimensions:	700(W) x 575(D) x 1660(H) mm (with canopy) 700(W) x 575(D) x 1030(H) mm (without canopy)	1400(W) x 570(D) x 1660(H) mm (with canopy) 1400(W) x 570(D) x 1290(H) mm (without canopy)
Weight:	118kg	221kg
Power Requirements:	415V 2A or 240V 2A Fused switch-disconnector (metal clad)	

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

HME Alumina Chip Forge



This free-standing forge provides a generous forge area with the capacity to heat 50mm steel bar to 1,500°C. The whisper-quiet blower unit is interlocked with the gas supply to prevent flaring or leakage in the event of power failure. The main burner unit includes a gas integrity check for the pre-ignition device. Alumina-chip technology minimises surface-scale formation.

N.B. Requires additional Heat Treatment Extraction.

Specification	
Gas Type:	Natural Gas or Propane
Dimensions:	700(W) x 575(D) x 880(H)mm
Weight:	131kg
Power Requirements:	415V 2A or 240V 2A, Fused switch-disconnector (metal clad)

HME Crucible Furnace



An automatic melting furnace with an A12 spouted crucible and assisted tilt-action for safe pouring. The quiet blower unit provides a forced air-draft to quickly achieve the higher temperatures needed to melt aluminium. Both gas and air supplies are interlocked to ensure safety in case of power failure, and the auto-ignition sequence prevents flaring to further protect the operator.

N.B. Requires additional Heat Treatment Extraction.

Specification	
Gas Type:	Natural Gas or Propane
Crucible Capacity:	5.6kg
Dimensions:	905(W) x 425(D) x 550(H) mm
Weight:	69kg
Power Requirements:	415V 2A or 240V 2A, Fused switch-disconnector (metal clad)

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

HME Moulding Bench



This heavily constructed unit provides a convenient means to prepare sand moulds while minimising the risk of spillage. The timber frame with plywood panels and doors gives an attractive, traditional appearance. The integral aluminium sand box and generous cupboard space below will contain all the tools and materials needed to ensure a clean, safe work environment.

Specification

Dimensions:	1200(W) x 600(D) x 1010(H) mm
	1800(W) x 600(D) x 1010(H) mm

HME Welding Bench



Featuring HME's distinctive single plinth design, this robust bench will provide a suitable platform for all welding and flame-cutting operations likely to be needed in a school or college setting. The central steel grid has a sand box below to capture sparks, and the refractory back and side surfaces will further contain hot particles. The unit is supplied with earth connection and a central storage shelf.

N.B. Requires additional Heat Treatment Extraction.

Specification

Dimensions:	700(W) x 570(D) x 950(H) mm
	1200(W) x 570(D) x 950(H) mm
	1400(W) x 570(D) x 950(H) mm
Weight:	73kg

Prices

As installation costs form a significant part of the overall price and vary depending on circumstances, we need to carry out a site survey before quoting.

Please contact TechSoft to discuss your Heat Treatment requirements and to arrange a visit.

Thermoforming Equipment

Formech Strip Heaters / Vacuum Formers

Formech Hot Wire Strip Heaters FLB500/1000



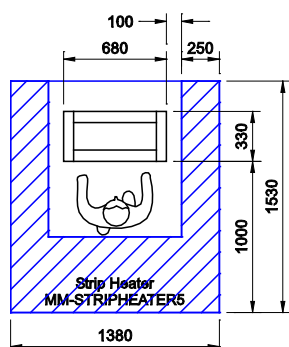
These robust and simple to operate machines from Formech feature temperature regulation and a material clamp to prevent bowing and to aid bend accuracy. Both machines have an adjustable heating gap to control the bend radius and (in addition) the FLB1000 model has a timer and alarm for reliably bending batches of the same material. The optional cooling jig enables material to be set to any given angle.

A key resource for plastics working – these robust, simple machines will suit most workshop or design studio needs.

Specification	FLB500	FLB1000
Max Sheet Width:	500mm	1000mm
Material Thickness:	6mm	
Weight:	8kg	15kg
Dimensions:	680(W) x 330(D) x 175(H)mm	1280(W) x 330(D) x 175(H)mm
Heater Type:	8mm Incoloy, 250W	8mm Quartz, 750W
Power Requirements:	240V 3A, 13A Socket	240V 4A, 13A Socket
Warranty:	UK Mainland & Northern Ireland: 1 Year Return to Base	

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10



Prices £*		*See Pricing Information on page 2
MM-STRIPHEATER5	*Formech FLB500 Strip Heater with Cooling Jig	
MM-STRIPHEATER8	*Formech FLB1000 Strip Heater with Cooling Jig	

Accessories and Consumables

For accessories and consumables see page 185

Formech Compac Mini Vacuum Former



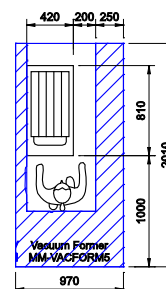
This is a compact and versatile machine requiring minimal working space aimed at entry level vacuum forming. Incorporating the latest technology it is safe and easy to use and can produce high quality vacuum formings. Forming area 280mm x 230mm. Single zone ceramic heaters, forms up 4mm material, safety interlock + pressure outlet.

Easy to house when space is tight and ideal as an individual resource where small packaging and housing projects are a regular need.

Specification	
Sheet Size:	300 x 250mm
Forming Area:	230 x 280mm
Max. Mould Height:	130mm
Max. Material Thickness:	4mm
Weight:	33kg
Dimensions:	440(W) x 835(D) x 425(H)mm
Power Requirements:	240V 13A, 13A Socket
Warranty:	UK Mainland & Northern Ireland: 1 Year Return to Base

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-VACFORM5	*Formech Compact Mini Vacuum Former	
MM-VACFORM5B	*Stand with Castors for MM-VACFORM5	
MM-VACFORM5F	*Reducing Window 125 x 100mm (aperture)	
MMP-VF-SP11	*Starter Pack of Plastic cut to 300 x 250mm. (Contains 20 panels 1mm black Gloss/Matt HIPS; 20 panels 1mm white Gloss/Matt HIPS; 30 colour panels 1.5mm (green, purple, sky blue) Gloss/Matt HIPS; 40 panels 1.5mm Black Pinseal ABS, 12 Panels 1mm Clear Styrolux)	

Accessories and Consumables

For accessories and consumables see page 185

Thermoforming Equipment

Vacuum Formers / Vac Form Trimmer

Formech 450DT Vacuum Former



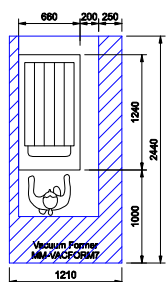
The 450DT has powerful quartz heaters which are ready to use in seconds providing rapid heat response times. Variable standby reduces power to the heater when it is in the rear position. The forming area is 430 x 280mm, and the 4" touch screen control allows the four independent heating zones to be controlled with ease. Up to 20 programs can be saved to the memory.

A high specification, large work area, and energy saving control systems make this an ideal whole-department resource and a highly capable individual workshop machine.

Specification	
Sheet Size:	450 x 300mm
Forming Area:	430 x 280mm
Max. Mould Height:	160mm
Max. Material Thickness:	6mm
Weight:	75kg
Dimensions:	639(W) x 986(D) x 525(H)mm
Power Requirements:	240V 13A, 13A Socket
Warranty:	UK Mainland & Northern Ireland: 1 Year Return to Base

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-VACFORM9	*Formech 450DT Vacuum Former	
MM-VACFORM9B	*Stand with Castors for MM-VACFORM9	
MM-VACFORM9C	*Reducing Window 228 x 203mm aperture for MM-VACFORM9	
MMP-VF-SP12	*Starter Pack of Plastic cut to 450 x 300mm. (Contains 12 panels 1mm black Gloss/Matt HIPS; 12 panels 1mm white Gloss/Matt HIPS; 36 colour panels 1.5mm (yellow, red, blue); 6 panels 1.5mm Black Pinseal ABS, 6 Panels 1mm Clear PETG)	

Accessories and Consumables

For accessories and consumables see page 185

* Available from TechSoft to UK only

RJH Finishing Gerbil 2010 / 2020 / 2030



MM-VACTRIM5
with optional
side shelf

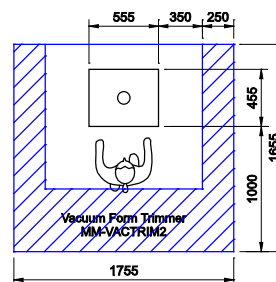
MM-VACTRIM2

These multi-purpose vacuum form trimming and finishing machines are designed for safe and accurate trimming of waste from vacuum-formed shells. They are supplied as standard with a Tungsten Carbide disc and holder for vacuum-form trimming. A no-volt release switch is fitted as standard. The 2020 differs from the 2010 in that it has a tilting table, an adjustable guide fence, a large diameter hand wheel, a dust extraction fence incorporating a tool guard and a full toolkit. The 2030 model adds a customised Gerbil Trolley and a small drum sander.

Specification	
Tool Height Adjustment:	20mm
Table Size:	400 x 455mm
Weight:	19kg (2010); 21kg (2020); 44kg (2030)
Dimensions:	400(W) x 455(D) x 315(H)mm (2010) 555(W) x 455(D) x 315(H)mm (2020)
Power Requirements:	240V 5A, 13A Socket
Warranty:	UK Mainland: 2 Years On-Site Elsewhere: 2 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-VACTRIM1	RJH Finishing Gerbil 2010	
MM-VACTRIM2	RJH Finishing Gerbil 2020	
MM-VACTRIM5	RJH Finishing Gerbil 2030	
MT-VT-TKIT1	Tool Kit for MM-VACTRIM1 Includes tungsten carbide disc and holder, tungsten carbide flange cutter, two flap wheels for general deburring, finishing mop and compound bar, polishing mop and compound bar, allen keys for tool changing	
SF-TROLLEY25	Trolley for Gerbil	
SF-TROLLEY25S	Optional Side Shelf for Gerbil Trolley Folds down when not in use	

Accessories and Consumables

For accessories and consumables see page 185

Thermoforming Equipment

Clarke Vacuum Formers

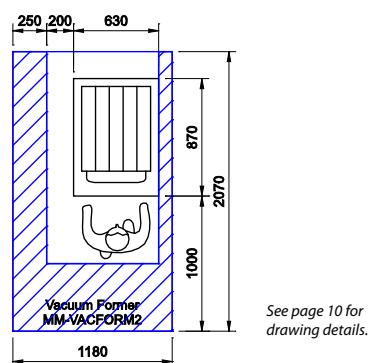
Clarke 1210 Vacuum Former



For sheet size 305 x 229mm. Hood and platen systems have chromed slide bars and nylon bushings for smooth operation, and a safety interlock to prevent moulds being raised into the heaters. Single zone ceramic elements for even heat distribution. Blow release to assist material removal and no-volt release automatically isolates the machine in the event of power failure. A stand is available.

N.B. Ideal as an individual resource for a systems and control/electronics teaching area, for example, where small packaging and housing projects are a regular need.

Specification	
Material Sheet Size:	305 x 229mm
Aperture Size:	280 x 204mm
Max. Mould Height:	100mm
Max. Material Thickness:	6mm
Weight:	41kg
Dimensions:	630(W) x 870(D) x 600(H)mm
Power Requirements:	240V 6A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect



Prices £*		*See Pricing Information on page 2	
MM-VACFORM2	Clarke 1210 Vacuum Former		
MM-VACFORM2B	Stand with Castors for MM-VACFORM2		

Accessories and Consumables

For accessories and consumables see page 185

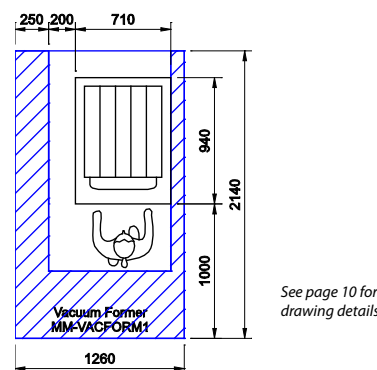
Clarke 725 / 750 FLB Vacuum Formers



For sheet sizes up to 458 x 254mm (725 FLB) or 508 x 458mm (750 FLB). Hood and platen systems have chromed slide bars and nylon bushings for smooth operation, and a safety interlock to prevent moulds being raised into the heaters. 4-zone ceramic elements have digital control, timing and display for even heat distribution. Blow release to assist material removal and no-volt release automatically isolates the machine in the event of power failure. Reducing plates are available for both machines.

N.B. Most workshops and Product Design areas will find this scale of machine answers all their day to day needs.

Specification	725 FLB	750 FLB
Material Sheet Size:	458 x 254mm	508 x 458mm
Aperture Size:	432 x 228mm	482 x 432mm
Max. Mould Height:	140mm	140mm
Max. Material Thickness:	6mm	6mm
Weight:	68kg	91kg
Dimensions (mm):	710(W) x 940(D) x 640(H)	760(W) x 1350(D) x 640(H)
Power Requirements:	240V 9A, 13A Socket	240V 12A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect	



Prices £*		*See Pricing Information on page 2	
MM-VACFORM1	Clarke 725 FLB Vacuum Former		
MM-VACFORM1B	Stand with Castors for MM-VACFORM1		
MM-VACFORM3	Clarke 750 FLB Vacuum Former (including Stand with Castors)		

Recommended Extras

MM-VACFORM1C	1/2 Sheet Reducing Plate for MM-VACFORM1 (Aperture 229 x 203mm, Sheet Size 254 x 229mm)	
MM-VACFORM3B	1/2 Sheet Reducing Plate for MM-VACFORM3 (Aperture 432 x 228mm, Sheet Size 458 x 254mm)	
MM-VACFORM3C	1/4 Sheet Reducing Plate for MM-VACFORM3 (Aperture 229 x 203mm, Sheet Size 254 x 229mm)	

Accessories and Consumables

For accessories and consumables see page 185

Clarke Thermoforming Centre 911



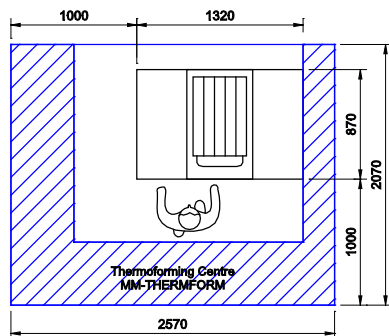
This Thermoforming Centre combines six processes into a single, mobile unit: Vacuum Forming, with two sheet sizes of 305 x 305mm and 305 x 152mm. Fan Circulated Oven with digital temperature control up to 400°C. This can be used for heating materials prior to dome blowing, injection moulding, extrusion and dip coating. Dome Blowing: three diameters, 305, 225 and 152mm. Plastic Dip Coating, with a fluidised bath 150 x 150 x 250mm deep. Injection Moulding, pneumatically actuated, complete with two moulds. Extrusion, complete with I section extrusion nozzle. Plastic Welding, with an industrial hot air welding torch, work table and adjustable angle stop.

N.B. If space is at a premium and resources need to be shared between rooms, this gives all the plastic-forming tools a department is ever likely to need in a neat format. Individual capacity is limited so, for most schools and colleges, stand-alone machines will be a more economical solution in addition to, or instead of, this machine.

Specification	
Vacuum Forming Sheet Sizes:	305 x 305mm & 305 x 152mm
Oven Temp Range:	0° to 400°C
Dome Blowing Diameters:	152mm, 225mm & 305mm
Plastic Dip Coating Bath Size:	150(W) x 150(D) x 250(H)mm
Weight:	207kg
Dimensions:	1320(W) x 870(D) x 1420(H)mm
Power Requirements:	240V 12A, 13A Socket
Warranty:	UK Mainland: 1 Year On-site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Clarke Profile Router 145



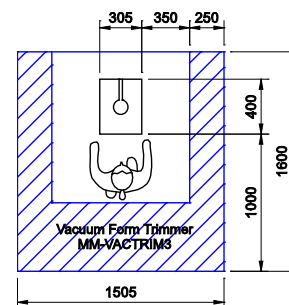
Trimming vacuum-formed shells is a key process which can be difficult to do accurately using conventional saws or snips. This Profile Router makes the job safe, and virtually fool-proof, by using a small carbide router cutter to cut excess material at a precise and consistent distance from the raised moulding. The distance can be adjusted to trim flush, or to leave a flange up to 6mm wide. This is achieved by using an ingenious guard that completely covers the rotating cutter but acts also as a guide to off-set the cut, and as a clamp to hold down the moulding. Spindle control is by footswitch thus leaving both hands free to control the work piece. The main cabinet has a port for connecting to LEV. LEV is not essential since the plastic waste will not become airborne, but is useful to maintain a tidy workspace.

This quiet, low maintenance machine will transform the ability to produce cleanly-trimmed vacuum formed shells in a busy classroom.

Specification	
Maximum thickness capability:	3mm
Trimming distance:	Flush to 6mm Flange
Cutter Speed:	2850rpm
Cutter:	3.18mm carbide slot drill
Motor:	180W (Industrial quality, balanced, fan cooled)
Weight:	14kg
Dimensions:	305(W) x 400(D) x 330(H)mm
Power Requirements:	240V 2A, 13A Socket
Warranty:	UK Mainland: 1 Year On-site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*

*See Pricing Information on page 2

MM-THERMFORM	Clarke Thermoforming Centre 911	
--------------	---------------------------------	--

Accessories and Consumables

For accessories and consumables see page 185

Prices £*

*See Pricing Information on page 2

MM-VACTRIM3	Clarke 145 Vacuum Form Cutter/profile router	
-------------	--	--

Thermoforming Equipment

Strip Heaters

Clarke Hot Wire Strip Heater 500

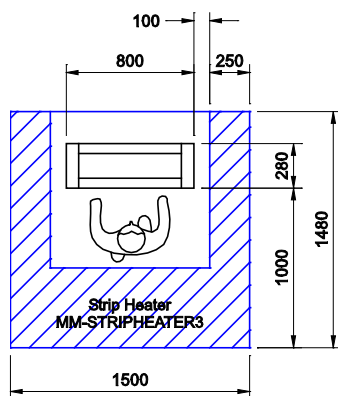


A simple 'no-frills' strip heater offering an economical solution for bending thermoplastics up to 4mm in thickness. A single wire is used which allows for tight radius folds. The wire has a single heat setting, is guarded and operates at low voltage for safety. Graduated scales on the work table assist accuracy which can be further enhanced by using the optional Folding Jig.

Specification	
Wires Below:	1
Wires Above:	0
Maximum Sheet Width:	500mm
Material Thickness:	4mm
Weight:	10kg
Dimensions:	800(W) x 280(D) x 70(H)mm
Power Requirements:	240V 0.4A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*

*See Pricing Information on page 2

MM-STRIPHEATER3	Clarke Hot Wire Strip Heater 500mm	
-----------------	------------------------------------	--

Consumables

For consumables see page 185

Clarke Hot Wire Strip Heaters 600S/D & 1000S/D



Clarke 600D

These latest hot wire strip heaters from CR Clarke feature calibrated, adjustable work stops for accuracy, adjustable wire height to suit a range of different materials, and the option of twin heating wires for bending larger radii when needed. Optional contact blades are available for bending thin material and all machines have a clamp beam to prevent bowing. In addition, 'D' models have an upper heater beam. This allows thicker and less thermally conductive plastics to be worked with confidence.

N.B. A key resource for plastics working – these capable machines will suit any workshop or design studio and have features to keep fingers away from hot plastic and elements.

Specification	600S	600D	1000S	1000D
Wires Below:	2	2	2	2
Wires Above:	0	2	0	2
Max Sheet Width:	600mm	600mm	1000mm	1000mm
Material Thickness:	8mm	10mm	8mm	10mm
Weight:	16kg	20kg	24kg	28kg
Dimensions:	790(W) x 410(D) x 240(H)mm	790(W) x 410(D) x 240(H)mm	1360(W) x 410(D) x 240(H)mm	1360(W) x 410(D) x 240(H)mm
Power Requirements:	240V 1A 13A Socket	240V 2A 13A Socket	240V 2A 13A Socket	240V 4A 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect			

Prices £*

*See Pricing Information on page 2

MM-STRIPHEATER1	Clarke Single Sided Hot Wire Strip Heater 600S	
MM-STRIPHEATER1D	Clarke Double Sided Hot Wire Strip Heater 600D	
MM-STRIPHEATER2	Clarke Single Sided Hot Wire Strip Heater 1000S	
MM-STRIPHEATER2D	Clarke Double Sided Hot Wire Strip Heater 1000D	
MMP-SH-JIG2	Clarke Calibrated Folding Jig 600mm Capacity	
MMP-SH-JIG3	Clarke Calibrated Folding Jig 1000mm Capacity	

Consumables

For consumables see page 185

Clarke Injection Moulder 25

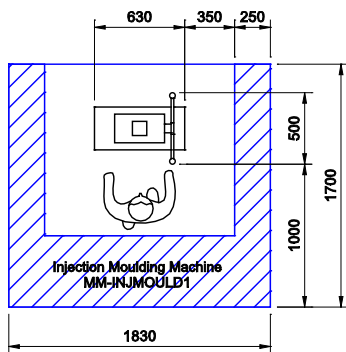


This well-engineered machine is ideal to demonstrate this important production process, and more than capable of producing dense, functional parts for projects. Up to 25g of suitable thermo-plastic is melted in the temperature controlled heating barrel and injection is by a rack and pinion driven ram. Two part moulds are locked into an over-centre clamping system which incorporates an automatic product release mechanism. Injection moulding is an ideal compliment to CNC milling for mould production.

Specification	
Mould Capacity:	Up to 25g
Ram type:	Calibrated rack and pinion - hand operated lever
Weight:	31kg
Dimensions:	630(W) x 500(D) x 730(H) mm
Power Requirements:	240V 2A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-INJMOULD1	Clarke Injection Moulder c/w wheel mould and 2kg of granules	

Hot Wire Sculptor 280

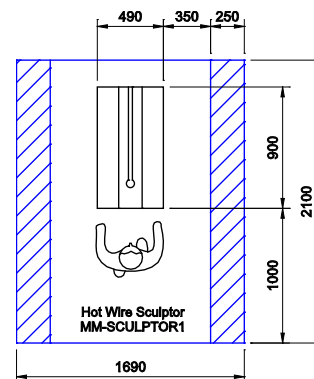


The ideal tool for cutting and shaping styrene and polystyrene foams for model making, display signs, etc. The robust polyethylene table is grooved to accept circle, angle and straight cutting guides so clean, dimensionally accurate, models can be produced with ease. A free-hand sculpting tool allows organic forms and details to be worked with equal precision. The wire is controlled by footswitch so only remains hot when being used for sculpting – this virtually eliminates the problem of excess fumes caused by plastic residues on the wire.

Specification	
Max Cutting Thickness	280mm
Cutting Angle:	Protractor adjustment on bow
Throat Depth:	635mm
Cutting Speed:	Bow: 5 speeds, Sculpting Tool: 3 speeds
Weight:	22kg
Dimensions:	490(W) x 900(D) x 510(H) mm
Power Requirements:	240V 2A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-SCULPTOR1	Clarke 280 Hot Wire Cutter	

Thermoforming Equipment

Dip Coating / Oven

Clarke Plastic Dip Coating System



This compact, portable system provides a fluidised bath of polythene powder for evenly coating pre-heated metal parts. The unit comprises both small (5 litre) and large (50 litre) fluidised baths for different sized components. A quiet blower unit provides the high-volume, low-pressure air supply needed. All the items are housed on a purpose built stand with a convenient control panel.

N.B. A Clarke Oven 200FD will be needed alongside this unit. Dip coating is an excellent finishing technique for workshops where metalworking is a priority.

Specification	
Weight:	17kg
Overall Dimensions:	670(W) x 770(D) x 770(H)mm
Power Requirements:	240V 5A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

300 Bath	
Internal Dimensions:	300(W) x 300(D) x 600(H)mm
External Dimensions:	340(W) x 320(D) x 760(H)mm
Static Volume:	50 litre
Min. Operating Volume:	25 litre

150 Bath	
Internal Dimensions:	150(W) x 150(D) x 250(H)mm
External Dimensions:	310(W) x 320(D) x 300(H)mm
Static Volume:	5 litre
Min. Operating Volume:	1.25 litre

120 Blower	
Dimensions:	400(W) x 240(D) x 230(H)mm
Weight:	6kg

Prices £*		*See Pricing Information on page 2
MM-DIPCOAT1	Clarke Plastic Dip Coating System (comprising Blower, 50 litre Bath, 5 litre Bath & Stand)	

Clarke Oven 200FD



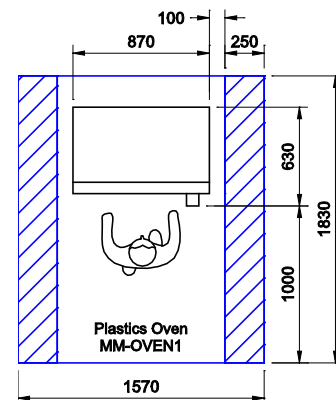
Designed for heating thermoplastics prior to forming and particularly suited for heating metal components ready for dip-coating. Digital temperature control and fan assistance ensure accurate, even heat distribution. The generous internal dimensions mean most project components will be accommodated.

N.B. Not a key resource but good to include for a well-resourced department. Essential alongside a dip-coating system.

Specification	
Temp. Range:	0° to 350°C
Internal Capacity:	508(W) x 355(D) x 304(H)mm
Weight:	50kg
External Dimensions:	870(W) x 630(D) x 600(H)mm
Power Requirements:	240V 13A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

CAD Drawing (with Safe Working Area)

Available on request in DXF, DWG & DTD (2D Design) formats. See page 10.



Prices £*		*See Pricing Information on page 2
MM-OVEN1	Clarke Oven 200FD	
MM-OVEN1E	Stand with Castors for MM-OVEN1	

Clarke R25 Schredder



Very much a machine for our age, the R25 Schredder enables students to turn waste plastic into useful material for future projects. By direct involvement with re-cycling, students will engage with key issues concerning sustainability, and begin to appreciate environmental imperatives that require effort and have a cost. Scrap material will need cleaning, drying and sorting which leads to questions about responsible consumption. The raw material may be free but how long before you break-even? Can you put a price on the environmental benefit of using material that otherwise would have been dumped? All important questions but, luckily, the machine itself is a lot simpler to explain!

The Clarke R25 Schredder is a cold granulator that uses a combination of fixed and rotating blades to process waste thermoplastic into fine granules. Material is loaded into a hopper and then passes through the blades until fine enough to pass a mesh filter and on into a collection bin. Most types of thermoplastic are suitable and this includes rigid (not foamed) polystyrene, PET, polypropylene, acrylic, etc. Material can be sorted into same-colour batches or mixed to give a speckled or multi-coloured effect.

N.B. The Schred recycling system is unable to fully process acrylic. The Schredder can granulate acrylics without issue, however the Sheet Press (or any other system) will be unable to re-constitute a sheet of pure acrylic.

Testing has proven that success rate with acrylic is very much dependant on the grade being used, and that (in reality) you would be unlikely to have any control or knowledge of this grade due to variations in composition from suppliers. On this basis, the best result that you could achieve reliably is material that has a content of acrylic (<50%), but that this is mixed with a more meltable material (such as HiPS or PP) acting as a binder between the grains of acrylic. This is still a very useable material.

Acrylic is unique in being tricky to process, but many other types of thermoplastic such as rigid (not foamed) polystyrene, LDPE (milk bottles), polypropylene, etc., can be processed with ease.

Specification	
Cutting Chamber:	200 x 280mm
Motor:	1kW
Rotor Speed:	290rpm
Max. Throughput Capacity:	80kg/hr
Weight:	265kg
Dimensions:	575(W) x 870(D) x 1370(H)mm
Power Requirements:	240V 8A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-RECYCLE1T	R25 Schred Plastic Granulator (3 phase)	
MM-RECYCLE1S	R25 Schred Plastic Granulator (1 phase)	

Clarke R30 Sheet Press



The R30 Sheet Press takes granulated thermoplastic material from the Shredder and uses heat and pressure to convert it into useable material for line bending, laser cutting, milling or vacuum forming. The press comprises two temperature controlled aluminium hotplates and a cassette to hold the granulated material. The cassette is evenly loaded with granules and placed between the hotplates. A built-in hydraulic ram is then used to compress the granules and an appropriate time and heat cycle is set on the digital control panel. Heat and pressure cause the granules to fuse, and when the cycle is complete, the pressure is released and the cassette is removed. Sheets must then be allowed to cool and this can be hastened by cold-water rinsing, or by using the optional fan-assisted cooling system.

The standard cassette supplied produces a flat 457 x 254mm sheet which is suitable for the Clarke 725 FLB vacuum former (see page 178). Other cassettes are available and these include a form tool for producing Frisbees. Making 'bespoke' form tools offers considerable scope for sustainable student project work and an interesting engineering challenge.

Specification	
Panel Size:	457 x 254mm (standard) 305 x 229mm (with optional MMP-RS-CAS1 tray) 457 x 305mm (with optional MMP-RS-CAS3 tray)
Average Panel Thickness:	2-3mm
Average Time to Press a Sheet:	10 minutes
Weight:	92kg
Dimensions:	690(W) x 510(D) x 620(H)mm
Power Requirements:	240V 8A, 13A Socket
Warranty:	UK Mainland: 1 Year On-Site Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-RECYCLE2	Clarke R30 Sheet Press	
MM-RECYCLE2B	Stand c/w Locking Castors (for MM-RECYCLE2)	
MM-RECYCLE2C	Cooling System (optional extra for stand MM-RECYCLE2B)	
MMP-RS-M1	Frisbee Mould for R30 Schred Press	
MMP-RS-CAS1	Schred PTFE Coated Sheet Cassette - 305 x 229mm Sheet Size	
MMP-RS-CAS2	Schred PTFE Coated Sheet Cassette - 457 x 254mm Sheet Size (Replacement)	
MMP-RS-CAS3	Schred PTFE Coated Sheet Cassette - 457 x 305mm Sheet Size	
MMP-RS-CAS4	Dry Sublimation Cassette	

Accessories & Consumables

Accessories and Consumables for Woodworking Machines

TechSoft MiniMax Bandsaw Blades

For S45NE:

MT-BS-BL1	Narrow Fine Blade, 10mm, 14tpi, for MM-BANDSAW13 (for straight and curve cuts in thin materials)	
MT-BS-BL2	Wide Fine Blade, 19mm, 14tpi, for MM-BANDSAW13 (for straight cuts in thin materials)	
MT-BS-BL3	Narrow Coarse Blade, 10mm, 6tpi, for MM-BANDSAW13 (for straight and curve cuts in thick timber)	
MT-BS-BL4	Wide Coarse Blade, 19mm, 6tpi, for MM-BANDSAW13 (for straight cuts in thick timber)	

For S400PE:

MT-BS-BL15	Narrow Fine Blade, 10mm, 14tpi, for MM-BANDSAW18 (for straight and curve cuts in thin materials)	
MT-BS-BL16	Wide Fine Blade, 19mm, 14tpi, for MM-BANDSAW18 (for straight cuts in thin materials)	
MT-BS-BL17	Narrow Coarse Blade, 10mm, 6tpi, for MM-BANDSAW18 (for straight and curve cuts in thick timber)	
MT-BS-BL18	Wide Coarse Blade, 19mm, 6tpi, for MM-BANDSAW18 (for straight cuts in thick timber)	

For S500PE:

MT-BS-BL19	Narrow Fine Blade, 10mm, 14tpi, for MM-BANDSAW19 (for straight and curve cuts in thin materials)	
MT-BS-BL20	Wide Fine Blade, 19mm, 14tpi, for MM-BANDSAW19 (for straight cuts in thin materials)	
MT-BS-BL21	Narrow Coarse Blade, 10mm, 6tpi, for MM-BANDSAW19 (for straight and curve cuts in thick timber)	
MT-BS-BL22	Wide Coarse Blade, 19mm, 6tpi, for MM-BANDSAW19 (for straight cuts in thick timber)	

For S600PE:

MT-BS-BL11	Narrow Fine Blade, 10mm, 14tpi, for MM-BANDSAW14 (for straight and curve cuts in thin materials)	
MT-BS-BL12	Wide Fine Blade, 19mm, 14tpi, for MM-BANDSAW14 (for straight cuts in thin materials)	
MT-BS-BL13	Narrow Coarse Blade, 10mm, 6tpi, for MM-BANDSAW14 (for straight and curve cuts in thick timber)	
MT-BS-BL14	Wide Coarse Blade, 19mm, 6tpi, for MM-BANDSAW14 (for straight cuts in thick timber)	

TechSoft MiniMax Circular Saw Blades

For SC1E, SC2WE and C30E:

MT-CS-BL1	Standard General Blade 250mm for MM-CIRCSAW7/10	
MT-CS-BL2	Standard Fine Cut Blade 250mm for MM-CIRCSAW7/10 (for thin materials, eg., acrylic sheet)	
MT-CS-BL3	Premium General Blade 250mm for MM-CIRCSAW7/10	
MT-CS-BL4	Premium Fine Cut Blade 250mm for MM-CIRCSAW7/10 (for thin materials, eg., acrylic sheet)	
MT-CS-BL5	Premium Rippling Blade 250mm for MM-CIRCSAW7/10	

For SC2 Classic:

MT-CS-BL20	Standard General Blade 300mm for MM-CIRCSAW12	
MT-CS-BL21	Standard Fine Cut Blade 300mm for MM-CIRCSAW12 (for thin materials, eg., acrylic sheet)	
MT-CS-BL22	Premium General Blade 300mm for MM-CIRCSAW12	
MT-CS-BL23	Premium Fine Cut Blade 300mm for MM-CIRCSAW12 (for thin materials, eg., acrylic sheet)	
MT-CS-BL24	Premium Rippling Blade 300mm for MM-CIRCSAW12	

For SC3WE, CU300E:

MT-CS-BL10	Standard General Blade 315mm for MM-CIRCSAW11	
------------	---	--

TechSoft MiniMax Planer Thicknesser Blades

MT-PT-BL1	Pk of 3 Tersa HSS 300mm knife for MM-PLANTHICK1	
MT-PT-BL11	Pk of 3 Tersa HSS 410mm knife for MM-PLANTHICK2	

Koolkut KK12 Vertical Panel Saw Blades

MT-PS-SB1	Triple Chip Saw Blade for MM-PANELSAW3 (General Purpose blade suitable for most materials)	
MT-PS-SB2	High Bevel Saw Blade for MM-PANELSAW3 (for MFC/Veneers etc.)	

Bosch GCM 12GDL / 12GCL Slide Mitre Saw Blades

MT-MS-BL1	General Blade (40 tooth) for MM-MITRESAW3	
MT-MS-BL2	Fine Blade (60 tooth) for MM-MITRESAW3	
MT-MS-BL3	Extra Fine Blade (96 tooth) for MM-MITRESAW3	

Fretsaw Blades

MT-FS-B1-36	36 Medium Blades for Hegner Fretsaws (suitable for wood and plastics, grade 6)	
MT-FS-B1-144	144 Medium Blades for Hegner Fretsaws (suitable for wood and plastics, grade 6)	
MT-FS-B2-36	36 Fine Blades for Hegner Fretsaws (suitable for wood and plastics, grade 3)	
MT-FS-B2-144	144 Fine Blades for Hegner Fretsaws (suitable for wood and plastics, grade 3)	
MT-FS-B3-36	36 Coarse Blades for Hegner Fretsaws (suitable for wood and plastics, grade 11)	
MT-FS-B3-144	144 Coarse Blades for Hegner Fretsaws (suitable for wood and plastics, grade 11)	

Bandfacer Consumables

Belts:

MT-BF-BLT60	1090 x 150 - 60 Grit Belt. For Antelope/Deer Bandfacer	
MT-BF-BLT80	1090 x 150 - 80 Grit Belt. For Antelope/Deer Bandfacer	
MT-BF-BLT100	1090 x 150 - 100 Grit Belt. For Antelope/Deer Bandfacer	
MT-BF-BLT60-10	1090 x 150 - 60 Grit Belt (Pack of 10). For Antelope/Deer Bandfacer	
MT-BF-BLT80-10	1090 x 150 - 80 Grit Belt (Pack of 10). For Antelope/Deer Bandfacer	
MT-BF-BLT100-10	1090 x 150 - 100 Grit Belt (Pack of 10). For Antelope/Deer Bandfacer	

RJH Extraction Consumables

MT-BF-FILTER1	Dust Extraction Unit Filter Bag for Antelope/Deer/Chamois	
---------------	---	--

Clarke Strip Heater Consumables

MMP-NCW-500	Pk of 3 Nickel Chrome Wire, Ready Made for MM-STRIPHEATER3	
MMP-NCW-920	Pk of 2 Nickel Chrome Wire, Ready Made for MM-STRIPHEATER4	
MMP-NCW25-10	10m Roll Nickel Chrome Wire 25SWG (for use with MM-STRIPHEATER1 material Thickness <1mm and MM-SCULPTOR1 for hot wire cutting)	
MMP-NCW20-10	10m Roll Nickel Chrome Wire 20SWG (for use with MM-SCULPTOR1 for sculptor tool)	
MMP-NCW20-120	Nickel Chrome Wire 20SWG, 1Kg roll, 120m approx. (for use with MM-STRIPHEATER1/2/7)	

Dip Coating Consumables

MMP-DC-POW1-5	5Kg Tub Polyethylene Dip Coating Powder for General Purpose Use. (Available in Black, Blue, White, Red)	
MMP-DC-POW1-20	20Kg Sack of Polyethylene Dip Coating Powder for General Purpose Use. (Available in Black, Blue, White, Red)	
MMP-DC-POW2-2	2Kg Tub PPA Dip Coating Powder for Heavy Use. (Available in White, Yellow, Red)	
MMP-DC-POW2-5	5Kg Tub PPA Dip Coating Powder for Heavy Use. (Available in White, Yellow, Red)	

RJH Finishing Gerbil Accessories

MT-VT-TKIT1	Tool Kit for MM-VACTRIM1. Includes tungsten carbide disc and holder, tungsten carbide flange cutter, two flap wheels for general de-burring, finishing mop and compound bar, polishing mop and compound bar, allen keys for tool changing	
MT-VT-TKIT2	Tool Kit for MM-VACTRIM1. Includes drum sander, tungsten carbide disc and holder, tungsten carbide flange cutter, two flap wheels for general de-burring, finishing mop and compound bar, polishing mop and compound bar, allen keys for tool changing	
MM-VACTRIM1U	RJH Morrisflex Gerbil 2010 Upgrade Kit. Provides everything that is needed to upgrade a Gerbil 2010 to a 2020. (Includes MT-VT-TKIT2)	

Injection Moulds

MMP-IM-M0	Injection Mould - Blank. (For use with MM-INJMOULD1)	
MMP-IM-M1	Injection Mould - Wheel. (For use with MM-INJMOULD1)	
MMP-IM-M2	Injection Mould - Paperclip. (For use with MM-INJMOULD1)	
MMP-IM-M3	Injection Mould - Golf Tee. (For use with MM-INJMOULD1)	
MMP-IM-M4	Injection Mould - Screwdriver Handle - 5mm Straight Shaft. (For use with MM-INJMOULD1)	
MMP-IM-M5	Injection Mould - Screwdriver Handle - 5mm Cranked Shaft. (For use with MM-INJMOULD1)	

Vacuum Forming Machines Service Kits

MMP-VF-SSK1	Service Kit for MM-VACFORM1 (includes Silicone Seal, Platen Seal, Filter & Adhesive)	
MMP-VF-SSK1C	Service Kit for MM-VACFORM1C (includes Silicone Seal & Adhesive)	
MMP-VF-SSK2	Service Kit for MM-VACFORM2 (includes Silicone Seal, Platen Seal & Adhesive)	
MMP-VF-SSK3	Service Kit for MM-VACFORM3 (includes Silicone Seal, Platen Seal, Filter & Adhesive)	
MM-VACFORM5E	Spare Parts Kit for MM-VACFORM5 (contains FSQ 200W quartz, FSQ 250W quartz, ceramic terminal blocks, seal kit (1xsealand, 5m 12x4 seal strip), toggle clamp, inline filter and 2 clamp knoblets)	
MM-VACFORM9E	Spare Parts Kit for MM-VACFORM6/9 (contains FSQ 300W quartz element, FSQ 250W quartz element, SSQ 550W quartz element, 2 ceramic terminal block, 2 clamp adjuster nut M5 Blk, 2 toggle clamp with blue grip - assembled - small, 2 clamp frame grip blue, seal kit (sealand + 5m 12x4, 2m 12x8 seal strip), pump filter (in-line large), 13A fuse)	

Injection Moulding Consumables

MMP-IM-PS-2	2Kg Tub Polystyrene Injection Moulding Granules (Red)	
MMP-IM-PS-5	5Kg Tub Polystyrene Injection Moulding Granules (Red)	
MMP-IM-PE-2	2Kg Tub Polyethylene Injection Moulding Granules (Blue)	
MMP-IM-PE-5	5Kg Tub Polyethylene Injection Moulding Granules (Blue)	
MMP-IM-PP-2	2Kg Tub Polypropylene Injection Moulding Granules (Grey)	
MMP-IM-PP-5	5Kg Tub Polypropylene Injection Moulding Granules (Grey)	

Vacuum Forming Sheets

MMP-VF-SP1	Pack of 50 Mixed Polystyrene Sheets 458mm x 254mm x 1.5mm. (For MM-VACFORM1)	
MMP-VF-SP2	Pack of 50 Mixed Polystyrene Sheets 310mm x 235mm x 1.5mm. (For MM-VACFORM2)	
MMP-VF-SP3	Pack of 50 Mixed Polystyrene Sheets 515mm x 464mm x 1.5mm. (For MM-VACFORM3)	
MMP-VF-SP0	Pack of 50 Mixed Polystyrene Sheets 305mm x 305mm x 1.5mm. (For MM-THERMFORM1)	
MMP-VF-SP11	Starter Pack of Plastic cut to 300 x 250mm. (Contains 20 panels 1mm black Gloss/Matt HIPS; 20 panels 1mm white Gloss/Matt HIPS; 30 colour panels 1.5mm (green, yellow, purple, sky blue) Gloss/Matt HIPS; 40 panels 1.5mm Black Pinseal ABS, 12 Panels 1mm Clear Styrolux)	
MMP-VF-SP12	Starter Pack of Plastic cut to 450 x 300mm. (Contains 12 panels 1mm black Gloss/Matt HIPS; 12 panels 1mm white Gloss/Matt HIPS; 36 colour panels 1.5mm (yellow, red, blue); 6 panels 1.5mm Black Pinseal ABS, 6 Panels 1mm Clear PETG)	

Extraction

Centralised Extraction Systems

Centralised Wood Dust Vacuum System



The System

The C-Vac system consists of a central vacuum fan and filter unit. Available in four different fan sizes C-Vac can provide all the extraction needs for a single workshop or multiple rooms. The system is controlled by a low-voltage circuit and simply operating a machine or connecting to a plug in point will start the system. A variable speed drive ensures that the fan only provides the power required to extract from the points in use, and is economical and quiet in operation. The C-Vac unit can be installed in the classroom, technician's preparation room or in an external enclosure. C-Vac is ATEX compliant.



Designed for Educational Workshops

The C-Vac System has been specifically developed for use in schools and colleges. This unique system has proven to provide cleaner, safer environments for teachers and pupils. It extracts dust from multiple machines simultaneously and incorporates plug in points for portable tools and attachments for floor and bench cleaning. Designed for ease of use it incorporates automatic valves linked to the wood working machines, so that the extraction is on when required. Dust is collected centrally in a sealable trolley-mounted bag for safe and easy disposal. C-Vac is powerful, yet quiet and economical in operation.

Installation

The C-Vac system can be easily installed in new build or existing workshops. Our P602 qualified design team will work with you to assess your requirements and agree the layout. Installation typically takes 2-5 days depending on the size of the system and can be achieved with minimum disruption to the teaching environment. Discrete ducting can be concealed within the ceiling void. Following installation each system is commissioned in accordance with HSG 258 guidance and supplied with user manuals and log books.

One system capturing from all sources

The C-Vac system can be connected to all wood working machinery including circular saws, planer thicknessers, bandsaws, disc sanders, bandfacers and wood lathes. Where bespoke extraction hoods are required (eg., crosscut saws, bobbin sanders) these will be designed, manufactured and installed. Each system is supplied with hoses and attachments for floor and bench cleaning. Portable tools and hand sanding blocks can be connected to the plug-in points with ease.

Automatic Valves
Commonly fitted to circular saws, planer thicknessers, bandsaws and belt sanders. Fitting automatic valves enables an automatic vacuum start up when a machine is activated.

Flap valves
Commonly used at plug-in points for floor and bench cleaning systems.



Manual Slide Valves
Commonly fitted to pillar drills, wood lathes, morticers and portable tools. Fitting manual slide valves allows the operator to manually activate the vacuum by opening the sliding mechanism.

Features

- Powerful high speed dust extraction
- System start can be linked to woodworking machinery - only operates when required
- Variable speed control ensures maximum performance and economy
- Plug in points for portable tools and attachments for floor and bench cleaning
- Quiet in operation in all workshops
- Single collection point with trolley mounted 240 litre dust collection bag
- Bag full and air flow indicators
- Each C-Vac system comes with a two-year warranty



Prices	
C-VAC System	Price subject to survey.

TS102 Extractor for Floor Standing Bandsaws



The TS102 extractor is designed specifically for use with floor-standing band saws. It is low level and will sit below the working bed height of most machines. The extractor is supplied with two ports, to allow connection to the bottom extraction port and top extraction via the collection hood supplied in our connection kit. The versatility of this extractor means that it can be used for other applications such as connecting to small duct manifolds for use with multiple fret saws or small sanders.

The extractor is fully compliant with HSG258, and can be a cost-effective alternative to a centralised system.

Specification	
Filter Area:	1.4m ²
Capacity of Dust Tray:	18 litres
Inset Size (left and/or right side):	1 x 100mm & 1 x 80mm diameter ports OR 2 x 80mm diameter ports OR 1 x 120mm port on one side only
Motor Power Rating:	0.75kw (1hp)
Weight:	74kg
Dimensions:	683(W) x 673(D) x 861(H)mm
Power Requirements:	240V 5A or 415V 2A
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-EXTRACT102	TS102 Extractor for Floor Standing Bandsaws (with manual switch). Please specify whether 1 phase or 3 phase is required.		
MM-SWITCH10	Auto-switched upgrade		
MM-EXTRACT102CK	Connection Kit		
MM-EXTRACT1AP	ATEX Explosion Relief Panel fitted to Extractor at time of purchase, where required to meet local authority or HSE requirements. (Generally advised where the application is for capture of large quantities of fine dust.)		

TS100 Extractor for Circular Saws



The TS100 extractor has been designed specifically for use with circular saws and has been constantly refined and improved over many years of use in schools. The extractor is supplied with two ports to allow collection below the blade and connection to the overhead crown guard with ducting and supports included in our connection kit. The unit can be supplied with an adjustable height MDF work-surface allowing the footprint of the extractor to be utilised as a take-off table, or alternatively (for panel saws with sliding tables, like our Minimax range) the extractor can be neatly located below the RH table.

The extractor is fully compliant with HSG258, and can be a cost-effective alternative to a centralised system.

Specification	
Fan Motor:	1.5kw
Filters:	4 x Tubular Terylene Needle Felt
Filter Area:	2.00m ²
Filter Cleaning:	Manual Agitation
Waste Collection:	Dust Tray
Explosion Relief:	Rear or Extractor - Inlet Area
Fan Inlet:	1 x 80mm & 1 x 150mm
Weight:	
Dimensions:	1250(W) x 851(D) x 800-977(H)mm
Power Requirements:	
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-EXTRACT100	TS100 Extractor for Circular Saws (with manual switch). Please specify whether 1 phase or 3 phase is required.		
MM-SWITCH10	Auto-switched upgrade		
MM-EXTRACT100CK	Connection Kit		
MM-EXTRACT1AP	ATEX Explosion Relief Panel fitted Extractor at time of purchase, where required to meet local authority or HSE requirements. (Generally advised where the application is for capture of large quantities of fine dust.)		

Extraction

Fixed Local Extraction Systems / Small Mobile System

TS105 Extractor for Planer Thicknessers & Lathes



Colour may vary

The TS105 extractor is specifically designed for use with machines which produce bulk waste or coarse dusts such as Planer/Thicknessers and Woodturning Lathes in line with HSG258 Guidelines. Waste is collected in a large polyethylene bag, for straightforward disposal.

The extractor is fully compliant with HSG258, and can be a cost-effective alternative to a centralised system.

Specification	
Filter Area:	1.6m ²
Dust Collection Bin Capacity:	150 litre
Inset Size:	1 x 120mm diameter (port on side only) OR 2 x 100mm diameter ports (one either side)
Motor Power Rating:	1.1kw
Weight:	132kg
Dimensions:	730(W) x 760(D) x 1500(H)mm
Power Requirements:	240V 7A or 415V 2.5A
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-EXTRACT105	TS105 Extractor for Planer Thicknessers & Lathes	
MM-EXTRACT105CK1	Connection Kit (TS105 Extractor to Planer Thicknesser)	
MM-EXTRACT105CK2	Connection Kit (TS105 Extractor to Panel Saw)	
MM-EXTRACT1AP	ATEX Explosion Relief Panel fitted Extractor at time of purchase, where required to meet local authority or HSE requirements. (Generally advised where the application is for capture of large quantities of fine dust.)	

TS101 and TS104 Extraction for Small Machines



TS101 Underbench Extraction

TS104 Mobile Extraction

The TS101 is a fixed extractor, ideal to locate either on a lower shelf or underneath a double workbench. It is designed specifically for use with fretsaws and other small worktop mounted machines requiring extraction.

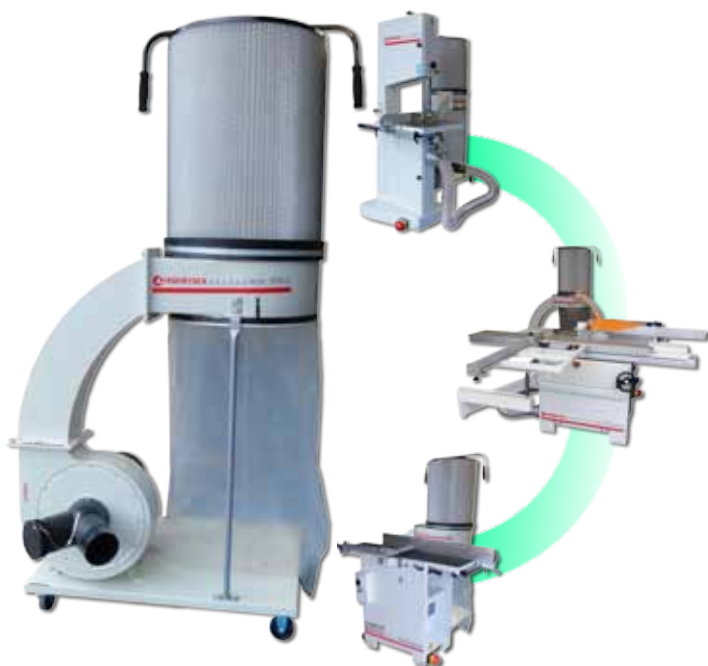
The TS104 is a mobile extractor ideal for locating under a single workbench. It is designed for use with fretsaws and other small worktop mounted machines requiring extraction.

Both extractors are fully compliant with HSG258, and can be a cost-effective alternative to a centralised system.

Specification	TS101	TS104
Filter Area:		0.84m ²
Inlets:	2 x 50mm diameter ports	2 x 80mm diameter or 1 x 100mm diameter
Motor Power Rating:	0.55kw	0.55kw
Weight:	62kg	46kg
Dimensions:	803(W) x 543(D) x 425(H) mm	500(W) x 500(D) x 685(H) mm (745(H)mm if inlet port at top)
Power Requirements:	240V 3.5A	240V 3A or 415V 1.3A
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect	

Prices £*		*See Pricing Information on page 2
TS101 Underbench Extractor		
MM-EXTRACT101	TS101 Extractor for Fretsaws and other small machines	
MM-EXTRACT101CK	Connection Kit (TS101 Extract. to Planer Thicknesser)	
MM-SWITCH9	Auto Switch Box	
TS104 Mobile Extractor		
MM-EXTRACT104	TS104 Mobile Extractor	
MM-EXTRACT104CK	Connection Kit (TS104 Extractor to Hegner Fretsaw)	
MM-SWITCH9	Auto Switch Box	

Minimax Dust Extraction System



This simple bag-extraction unit provides an economical solution for larger machines in a preparation area. The powerful fan unit will extract fine dust and chips from any of the Minimax machines. These share common extraction port details so swapping from one machine to another is simply a matter of transferring a pipe.

To provide total control, TechSoft have upgraded the main top filter to a compact cartridge type. This will capture even the finest of particulates and will ensure a clean, healthy working environment at all times. When approaching full, the lower collection bag is removed in its entirety for disposal. With care to tie the bag and remove it carefully, the system allows for safe, mess-free, waste removal.

Specification	
Filter Area:	1.4m ²
Capacity of Dust Tray:	18 litres
Inset Size (left and/or right side):	1 x 100mm & 1 x 80mm diameter ports OR 2 x 80mm diameter ports OR 1 x 120mm port on one side only
Motor Power Rating:	0.75kw (1hp) 230/1/50 or 400/3/50
Full Load Amps:	1 Phase = 5.1A, 3 Phase = 1.8A
Starter:	Optional
Weight:	74kg
Dimensions:	683(W) x 673(D) x 861(H)mm
Power Requirements:	
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-EXTRACTION70S	Minimax Dust Extractor with 1 bag (1 phase)		
MM-EXTRACTION70T	Minimax Dust Extractor with 1 bag (3 phase)		
MMP-EXT-CONKIT1	125 to 100mm Steel Reducer		
MMP-EXT-CONKIT2	100 to 60mm Steel Reducer		
MMP-EXT-SACK1-10	Pack of 10 Heavy Duty Waste Sacks		

ESTA Dustomat-10



The ESTA Dustomat-10 is the premium option where a centralised system is not possible. This unit can be used in a fixed position, or (where necessary) can be moved around between several machines (eg., bandsaw, circular saw, planer/thicknesser, etc.) with ease thanks to its heavy-duty lockable castors. The cleanable permanent filter cartridge ensures low operating costs, whilst even the finest of particulates are captured to maintain a clean and healthy working environment at all times. ESTA's patented tiltable filter housing allows quick, safe and mess-free disposal of collected material. A high performance motor, fan and seals ensure that noise levels within the working environment are significantly lower than other systems of this type.

Specification	
Extraction Motor	1.3kW
Extraction Bag Capacity	100 litres
Max Airflow:	720m ³ /hr
Max neg. pressure:	2.800Pa
Hose Diameter:	100mm
Weight:	120kg
Dimensions:	530(W) x 1165(D) x 1636(H)mm
Power Requirements:	240V 1.3kW, 16A CEEFORM Socket
Warranty:	UK Mainland: 1 Year Return and Collect Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2	
MM-EXTRACTION80	ESTA Dustomat-10 Extractor (1 phase)		

Extraction

Workshop Extractors

Standard Extractor, Single Motor



These high-quality British-built extractors are ideal where space is limited. Using appropriate extraction adaptors, they have sufficient power and capacity to serve as LEV units for machines producing lower volumes of finer dust. This makes them the ideal solution for extracting from TechSoft's milling/engraving machines and fretsaws. The extractors feature a threaded exhaust port which allows warm air to be ducted to atmosphere – ideal to prevent overheating when the unit is sited in a cupboard. Steel construction reduces static build-up and the sound attenuating motor housing allows unobtrusive continuous operation in a busy classroom. Waste is collected in the economical Hepaflo filter bags making emptying safe and convenient.

Specification	
Extraction Motor	1.2kW
Extraction Bag Capacity	15 litres
Airflow	45 litres per second
Suction	240Mbar
Hose Diameter:	32 and 51mm
Weight:	11.7kg
Dimensions:	400(W) x 450(D) x 740(H)mm
Power Requirements:	240V 1.2kW, 13A Socket
Warranty:	UK Mainland: 2 Years Return to Base Elsewhere: 2 Years Return and Collect

Prices £*		*See Pricing Information on page 2
MM-EXTRACTION36	Standard Extractor, Single Motor	
MMP-EXT-BAG1	10 Hepa-Flo bags for MM-EXTRACTION21	
MMP-EXT-BAG1-16	160 Hepa-Flo bags for MM-EXTRACTION21	
MMP-EXT-FLOORKIT1	Floor Cleaning Kit for MM-EXTRACTION21 <i>(includes clip-on wheeled chassis, floor cleaning tool and steel tube set)</i>	

Auto Switch Box

This unit provides a simple but highly effective means to automatically run an extraction unit when a machine starts working. The switch box plugs into a standard mains socket and provides similar sockets to power the extractor and one (single version) or two (double version) machines. Total maximum load is 13A.

Prices £*		*See Pricing Information on page 2
MM-SWITCH2	Auto Switch Box - Single	
MM-SWITCH3	Auto Switch Box - Double	

Workshop Extractor, Single/Double Motor



The Single Motor Workshop Extractor shares the same motor and filtration system as the Standard Extractor, but gives greater capacity making it more suitable for workshop applications. The Double Motor model is identical except for power, and will be needed to extract heavier, higher volume waste.

Connection kits may be required to connect the Hiloflex hose, which has a smooth bore for efficiency and reduced risk of blocking, to a machine. Waste is collected in the economical Hepaflo filter bags making emptying safe and convenient.

Specification	Single Motor	Double Motor
Extraction Motor	1.2kW	2.4kW
Extraction Bag Capacity	35 litres	35 litres
Airflow	45 litres per second	80 litres per second
Suction	240Mbar	
Hose Diameter	32 and 51mm	
Weight:	13.8kg	
Dimensions:	400(W) x 450(D) x 740(H)mm	
Power Requirements:	240V 1.2kW, 13A Socket	240V 2.4kW, 13A Socket
Warranty:	UK Mainland: 2 Years Return to Base Elsewhere: 2 Years Return and Collect	

Prices £*		*See Pricing Information on page 2
MM-EXTRACTION23	Workshop Extractor, Single Motor	
MM-EXTRACTION32	Workshop Extractor, Double Motor	
MMP-EXT-BAG2	10 Hepa-Flo bags for MM-EXTRACTION23/32	
MMP-EXT-BAG2-6	60 Hepa-Flo bags for MM-EXTRACTION23/32	
MMP-EXT-FLOORKIT2	Floor Cleaning Kit for MM-EXTRACTION23/32 <i>(includes clip-on wheeled chassis, hose, floor cleaning tool and steel tube set)</i>	

Variable Height Dust Extraction Nozzle

For extracting waste from a lathe or other dust source where direct connection to the machine is not possible or convenient.



Prices £*		*See Pricing Information on page 2
MM-EXTRACTION8	Variable Height Dust Extraction Nozzle	

Down Draught Table



This robust table will help maintain a healthy working environment whenever students need to carry-out dust or fume generating processes. Wood-sanding and using solvent-based paints and adhesives are obvious examples. The table contains a fan unit which draws air down and away from the operator. Filters within the cabinet trap harmful contaminants and the filtered air is then recycled into the workspace. The standard filter set supplied with the machine meets EU4 standards and will capture 98 – 99% of all contaminants above 10 microns.

Fan Motor	Ave. Air Velocity @ Filter Face (Surface Velocity)	Average Airflow	Ventilated Area	Noise Level @ 2m
550w	1.50m/sec	2000m ³ /hr	1210x656mm	63Dba

Dimensions:	1274(W) x 660(D) x 840(H)mm
Power Requirements:	240V 2A, 13A Socket
Warranty:	UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect

Prices £*		*See Pricing Information on page 2
MM-DDTAB7A	Heavy Duty Downdraught Bench, BV-FP126784	

Solder Fume Extraction Unit



SF-SOLDER-EXT



SF-SOLDER-EXT3

These self-contained units connect directly to Solder Fume Trunking. The larger SF-SOLDER-EXT features a digital control panel and will service up to 30 extraction ports simultaneously; castors allow easy access to the filters. SF-SOLDER-EXT3 has manual controls and is suitable for between 3 to 15 ports. Air is passed through two stages of filtration, HEPA to remove particulates and activated charcoal to absorb any volatile compounds. Both units are quiet in operation and do not require external ventilation.

Prices £*		*See Pricing Information on . 2
SF-SOLDER-EXT3	Solder Fume Extraction Unit with pipework connection kit (to service up to 15 soldering irons - subject to the overall length of the extraction trunking)	
SF-SOLDER-EXT	Solder Fume Extraction Unit with pipework connection kit (to service up to 30 soldering irons, subject to the overall length of the extraction trunking)	
SF-SOLDER-EXT3B	Tip Extraction Kit for SF-SOLDER-EXT3 (contains 3 x soldering iron connectors, 3 x 3m straight pipe 32mm, 4 x 90° elbow 32mm, 2 x T joints 32mm, 2 x end joints 32mm)	
MMP-SOLEXT3-MF	Main Filter for SF-SOLDER-EXT3	
MMP-SOLEXT3-PF4	Pack of 4 pre-filters for SF-SOLDER-EXT3	
MMP-SOLEXT-MF	Main Filter for SF-SOLDER-EXT	
MMP-SOLEXT-PF4	Pack of 4 Pre-Filters for SF-SOLDER-EXT	

Extraction Booths



BV200H



BV200H-D

These extraction booths are essential to maintain a healthy environment when using adhesives or paint sprays in the workshop or studio. Each unit contains a fan which gently draws contaminated air towards a filter panel which will trap harmful material.

The BV100H and BV200H models re-circulate the filtered air so will be suitable for occasional use in well-ventilated spaces. The BV100H-D and BV200H-D units have Flexi-ducts which exhaust the filtered air to atmosphere via an open window, etc. These units will suit more continuous use, particularly if using solvent-based sprays or adhesives.

Model	Fan Motor* Spec	Air Volume at Free Air	Ave. Air Velocity at Filter Face	Ave. Air Velocity at Hood Face	Noise Level LAeq dB(A)
BV200H	40W	325 m ³ /hr	0.5m/sec	0.25m/sec	59
BV100H	80W	650 m ³ /hr	0.5m/sec	0.25m/sec	61
BV200H-D	105W	355 m ³ /hr	0.6m/sec	0.25m/sec	58
BV100H-D	210W	710 m ³ /hr	0.6m/sec	0.27m/sec	60

Weights:	BV200H: 20kg BV200H-D: 21kg	BV100H: 35kg BV100H-D: 37kg
Dimensions:	BV200H: 680(W) x 450(D) x 600(H)mm BV100H: 960(W) x 620(D) x 740(H)mm	
Power Requirements:	240V All models <2A, 13A Socket	
Warranty:	UK Mainland: 5 Years Return to Base Elsewhere: 5 Years Return and Collect	

Prices £*		*See Pricing Information on page 2
MM-SPRAYBOOTH2	Spraybooth bench mounted BV200H	
MM-SPRAYBOOTH1	Spraybooth bench mounted BV100H	
MM-SPRAYBOOTH4	Air Extraction Cabinet BV200H-D	
MM-SPRAYBOOTH3	Air Extraction Cabinet BV100H-D	
Stands		
MM-SPRAYBOOTH2A	Portable Workbench for MM-SPRAYBOOTH2/4	
MM-SPRAYBOOTH1A	Portable Workbench for MM-SPRAYBOOTH1/3	
Filters		
MM-SPRAYBOOTH1B	Filter set for MM-SPRAYBOOTH1/3	
MM-SPRAYBOOTH1C	Pack of 6 particulate (intake) filters for MM-SPRAYBOOTH1/3	
MM-SPRAYBOOTH1D	Carbon Impregnated fibre filter for MM-SPRAYBOOTH1	
MM-SPRAYBOOTH1E	Pleated fine particulate (intake) filter for MM-SPRAYBOOTH1	
MM-SPRAYBOOTH2B	Filter set for MM-SPRAYBOOTH2	
MM-SPRAYBOOTH2C	Pack of 6 particulate (intake) filters for MM-SPRAYBOOTH2/4	
MM-SPRAYBOOTH2D	Carbon Impregnated fibre filter for MM-SPRAYBOOTH2	
MM-SPRAYBOOTH2E	Pleated fine particulate (intake) filter for MM-SPRAYBOOTH2	

Saws & Blades



Mini Saw Bahco Mini Saw (uses conventional 12" hacksaw blades)

HT-SAW4



Junior Hacksaw. Chrome finish

HT-HACKSAW1

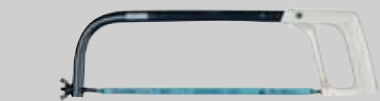


Eclipse Junior Hacksaw Blades

Pack of 10. For HT-HACKSAW1

MT-JHS-B14-10 14tpi (for wood)

MT-JHS-B32-10 32tpi (for metal)



Eclipse 12" Hacksaw. Britain's most famous hacksaw, featuring a diecast metal handle and tubular frame construction.

HT-HACKSAW2



Eclipse 12" All Hard HSS Hacksaw Blades.

Pack of 10

MT-HS-B14 14tpi

MT-HS-B18 18tpi

MT-HS-B24 24tpi

MT-HS-B32 32tpi



Hardpoint Wood Saw Bahco 244 Hard Point Wood Saw

HT-SAW5 20"

HT-SAW6 22"



Tenon Saw Bahco 244 Hard Point 12" Tenon Saw

HT-SAW7



Dovetail Saw 8" Dovetail Saw, 20tpi. Stained beech handle

HT-SAW8



Gents Saw 8" 203mm Crown Gents Saw. Rosewood, Brass Back, 17tpi.

HT-SAW13



Coping Saw & Blades Bahco Coping Saw 14tpi, blade length 150mm. Overall length 310mm.

HT-SAW10

HT-SAW10A Pack of 5 Blades



Fretsaw & Blades Bahco 302 Fretsaw. Overall length 260mm, bow depth 308mm.

HT-SAW11 Bahco 302 Fretsaw

HT-SAW11A Pk of 12 Blades for Wood

HT-SAW11B Pk of 12 Med. Spiral Blades



Piercing Saw & Blades Faithfull Piercing Saw

HT-SAW12 Faithfull Piercing Saw

HT-SAW12A Pk of 12 Saw Blades 48tpi



Mitre Saw Nobex Champion Compound Manual Mitre Saw. 630mm blade length; 125mm max. cap at 45°; 200mm max. cap. At 90°; 180mm max. cutting height; table size 500 x 125mm; blade width 45mm.

MM-MITRESAW4



For full class sets of handtools together with storage cupboards see page 217.

Hammers & Mallets



Claw Hammer with Hickory Shaft.

- HT-HAMMER10 8oz
- HT-HAMMER11 16oz
- HT-HAMMER12 20oz



Stanley Curved Claw Hammer.
Fibreglass Shaft 450g.

HT-HAMMER13



Stanley Steelmaster Claw Hammer. 16oz.

HT-HAMMER14



Joiners Hammer

- HT-HAMMER15 227g / 8oz
- HT-HAMMER16 283g / 10oz
- HT-HAMMER17 340g / 12oz



Stanley 1/2" Pin Hammer. 3.5oz.

HT-HAMMER18



Ball Pein Hammer with Hickory Shaft.

- HT-HAMMER19 8oz
- HT-HAMMER20 12oz
- HT-HAMMER21 16oz
- HT-HAMMER22 1.5lb



Thor Copper / Rawhide Hammer

- HT-HAMMER24 Size 1 (725g, 32mm dia)
- HT-HAMMER25 Size 2 (1070g, 38mm dia)
- HT-HAMMER26 Size 3 (1650g, 44mm dia)



Thor Plastic Hammer

- HT-HAMMER2 Size 1 (1.1/2lb, 1.1/2 in dia)
- HT-HAMMER28 Size 2 (2lb, 1.3/4 in dia)



Thor Junior Lite Rubber Faced Hammer. 10oz

HT-HAMMER5



Planishing Hammer 142g (5oz) Round and Square

HT-HAMMER29



Curved & Finished Hammer

HT-HAMMER30



Dead Blow Hammer

- HT-HAMMER31 14oz
- HT-HAMMER32 2lbs



Faithfull Club Hammer. Hickory Shaft.

- HT-HAMMER33 2.5lb
- HT-HAMMER34 4lb



Faithfull Carpenters Mallet

- HT-MALLET2 102mm
- HT-MALLET3 114mm



Faithfull Carvers Mallet. 90mm

HT-MALLET4

Pliers, Cutters & Punches



Stanley 150mm ControlGrip Wire Strippers.

HT-STRIP1



Stanley ControlGrip Plier 3 Piece

HT-PLIERS6



3 Piece Locking Plier Set 5" Curved Jaw, 6" Long Nose, 10" Curved Jaw

HT-PLIERS11



4 Piece Stainless Steel Tweezer Set. Contains 1 x 113mm long straight, 115mm curved, 115mm spade, 120mm self closing

HT-TWEEZER1



Stanley Fatmax Mini Plier Set 3 Piece

HT-PLIERS7



Stanley Max Steel Aviation Snips

HT-SNIPS2 Left Hand

HT-SNIPS3 Straight

HT-SNIPS4 Right Hand



210mm Interchangeable Hole Punch & Eyelet Pliers.

HT-PUNCH4



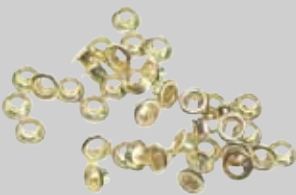
Stanley FatMax End Cut Plier 150mm

HT-PLIERS8



Stanley Max Steel Aviation Snips Long

HT-SNIPS5



Brass Eyelets 7/32" Pack of 50.

HT-PUNCH4A



Stanley FatMax Groove Joint Plier 300mm/12"

HT-PLIERS9



Record Jewellers Snips (straight) 7"

HT-SNIPS6 Straight

HT-SNIPS7 Curved



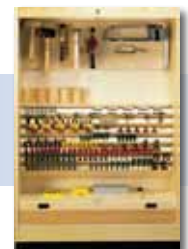
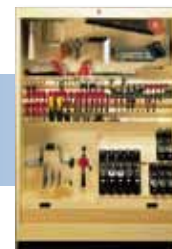
Coloured Eyelets 6000 5/32 Pack of 100.

HT-PUNCH4B



Stanley FatMax Bent Long Nose Plier 160mm

HT-PLIERS10



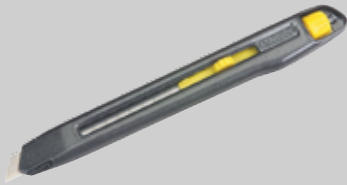
For full class sets of handtools together with storage cupboards see page 217.

Knives & Blades



Stanley Retractable Blade Knife. Stanley 99E
Retractable Blade Knife with 3 Spare Blades

- HT-KNIFE3** Retractable Blade Knife
- HT-KNIFE3A** Dispenser with 10 Blades



Stanley Interlock Snap off Knife 9mm

- HT-KNIFE5** 9mm Snap off Knife
- HT-KNIFE5A** Dispenser with 10 Blades



Stanley Interlock Snap off Knife 18mm

- HT-KNIFE6** 18mm Snap off Knife
- HT-KNIFE6A** Dispenser with 10 Blades



Throwaway Craft Knives. Pack of 3 Throwaway Stanley Craft Knives, moulded plastic.

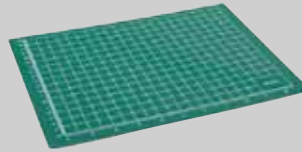
HT-KNIFE7



Precision Hobby Knife Set. 16 Piece

HT-KNIFE8

Cutting Mats



Green Self-Healing Cutting Mat.

- RS-CUTMAT1** A3 Size
- RS-CUTMAT2** A2 Size
- RS-CUTMAT3** A1 Size

Scissors



Classmaster Scissor Block with Scissors. 26 x Right Handed, 6 x Left Handed.

HT-SCISSORS32



General Purpose Scissors

- HT-SCISSOR6** 130mm (5")
- HT-SCISSOR7** 170mm (6.5")
- HT-SCISSOR8** 210mm (8")
- HT-SCISSOR9** 255mm (10")



Wiss High Quality Scissors for Fabrics, Upholstery & Composite Materials. Precision Ground Blades.

- HT-SCISSOR10** 210mm (8") Blades
- HT-SCISSOR11** 255mm (10") Blades



For full class sets of handtools together with storage cupboards see page 217.

Deburring & Files



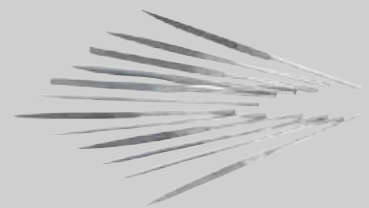
9 Piece General Purpose Deburring Set. Includes 1 plastic handle, 1 each of E100, E200, E300, B10, B20 & B30 Blades, 1 each of E holder and B holder..

HT-DEBUR1



Noga Pocket Deburring Tool. Comes with 1 x S10 Blade. Holds all S-Type Blades.

HT-DEBUR2



12 Piece Medium Cut Needle File Set.

HT-FILES11



6 Piece 8" Engineers Files Set with Handles.

HT-FILES8



Combination File Card & Brush.

HT-FILES9

Hand Tools

Hand Tools

Screwdrivers



Stanley FatMax 12 Pc Screwdriver Mixed Set
HT-SCREWDRV8



Stanley FatMax Precision Screwdriver Set 6 Pc
HT-SCREWDRV9



Stanley Instrument Screwdriver Set 6 Pc
HT-SCREWDRV10

Staplers



Stanley Heavy-Duty Staple Gun
HT-STAPLEG1



Stanley Heavy-Duty Staples

HT-STAPLEG1A	6mm x 1000
HT-STAPLEG1B	8mm x 1000
HT-STAPLEG1C	10mm x 1000
HT-STAPLEG1D	12mm x 1000
HT-STAPLEG1E	14mm x 1000

Spanners & Sockets



Stanley 13 Pc Metric Combination Spanner Set
HT-SPANSET4



Stanley Microtough Socket Set 17 Pc 1/4 Square Drive
HT-SOCKSET2



Stanley Microtough Socket Set 3/8 Drive
HT-SOCKSET3



Stanley MaxSteel Adjustable Wrench

HT-WRENCH5	150mm
HT-WRENCH6	200mm
HT-WRENCH7	250mm

Hand Drill



Stanley 105 Hand Drill
HT-DRILL5

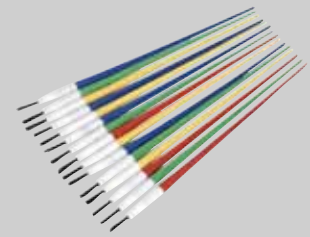
Paint Brushes



Stanley Max Finish Advanced Synthetic Paint Brush 3 Piece Set.
HT-PTBRUSH2



Disposable Paint Brush 12mm
HT-PTBRUSH3



Touch-Up Paint Brush Assortment 24pc Plastic Handles
HT-PTBRUSH4

Riveting



Stanley Right Angle Steel Riveter
HT-RIVET2

Stanley Aluminium Rivets

HT-RIVETS3A	3mm Medium x 20
HT-RIVETS3B	3mm Long x 15
HT-RIVETS3C	4mm Short x 20
HT-RIVETS3D	4mm Medium x 20
HT-RIVETS3E	4mm Long x 15
HT-RIVETS3F	5mm Short x 15
HT-RIVETS3G	5mm Medium x 15

Woodworking Chisels



Stanley Dynagrip Chisel Set (5) with Strike Cap. Full length blade guard for added safety. Includes 6mm (1/4 in), 12mm (1/2 in), 18mm (11/16 in), 25mm (1 in), 32mm (1 1/4 in)

HT-CHISEL5



Crown 4 Pc Woodworking Chisel Set in Wooden Box 1/4", 1/2", 3/4", 1"

HT-CHISEL6



Crown 10 Pc Woodworking Chisel Set in Wooden Box.

HT-CHISEL7



Crown 4 Pc Butt Chisel Set in Wood Box

HT-CHISEL8



Crown 12 Pc Professional Woodcarving Chisel Set in Wooden Box

HT-CHISEL9

Planes



Irwin Record 1/2" Block Plane No 60 152mm

HT-PLANE2



Irwin Record No4 Smoothing Plane 2"

HT-PLANE4



Stanley Duplex Rebate Plane

HT-PLANE5

Drilling/Thread Cutting



Dormer TiN 19pc A002 Drill Set. Containing 19 x A002 Tin Coated HSS jobber drills (1.0mm - 10.00mm x 0.5mm).

HT-DRILLSET2



Drill & Hand Tap Set. Includes: Taps E500-M3, M4, M5, M6, M8, M10, M12, A002/Drills 2.5, 3.3, 4.2, 5.0, 6.8, 8.5, 10.2.

HT-DRILLSET3



31pc HSS Ground Tap & Die Set

HT-TAPDIE2

Hex / Torx Keys



9 Pc 1.5-10mm Ball-Ended Hex Key Set - Metric

HT-HEXKEYSET3



13 Pc 0.050 - 3/8" Ball-Ended Hex Key Set - Imperial

HT-HEXKEYSET4



8 Pc T9-T40 TORX Key Set

HT-TORXKEYSET1

Cabinet Scrapers



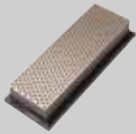
Set of 3 Crown Cabinet Scrapers with rectangle, gooseneck and concave/convex blades.

HT-SCRAPER1

Hand Tools

Hand Tools

Sharpening



DMT 6" Diamond Whetstone in Plastic Case

- HT-STONE1** 220 Grit
- HT-STONE2** 600 Grit
- HT-STONE3** 1200 Grit



Norton India Combination Bench Stone. 100 x 25 x 12mm (Coarse - Medium/Fine)

HT-STONE4



Norton India Bench Stone. 200 x 50 x 25mm

- HT-STONE5** Medium
- HT-STONE6** Fine
- HT-STONE7** Coarse



Trend Bench Holder for 6-8" Sharpening Stones.

HT-STONE8



Norton India Round Edge Slipstone. Medium (100 x 25 x 11 x 5mm)

HT-STONE9



DMT Diamond Honing Cones - Fine 600 grit

HT-STONE10

Wire Brushes



Wire Scratch Brush. Steel wire, red plastic handle.

HT-BRUSH3



Wire Scratch Brush. Stainless steel wire, blue plastic handle

HT-BRUSH4



Wire Scratch Brush. Brass wire, yellow plastic handle

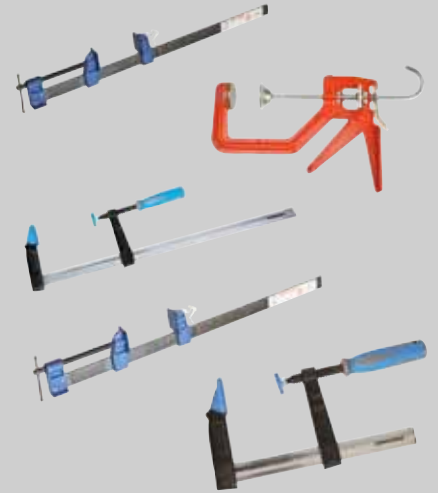
HT-BRUSH5



Stanley Miniature Abrasive Brush Set. (3 Assorted)

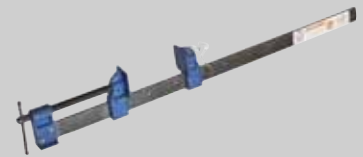
HT-BRUSH6

Clamps



Selection of Clamps. Includes 6 Silverline F Clamp 200x100mm; 4 Silverline F Clamp 450x80mm; 4 Solo One Handed GClamp 150mm; 2 Faithfull Sash Clamp 600mm; 2 Faithfull Sash Clamp 1200mm.

HT-CLAMPK1



Faithfull General Duty Sash Clamp

- HT-CLAMP7** 600mm
- HT-CLAMP8** 1200mm



Solo One Handed Metal G Clamp, 6"

HT-CLAMP9



Silverline Heavy Duty F Clamp

- HT-CLAMP10** 200 x 100mm
- HT-CLAMP11** 450 x 80mm

Measuring & Marking Out



Stainless Steel Rule With photo-etched markings

- RS-RULER9** 150mm Metric/Imperial
- RS-RULER10** 300mm Metric/Imperial
- RS-RULER11** 1000mm Metric/Imperial



Mitutoyo Steel Rule

- RS-RULER7** 150mm Metric (0.5/1mm)
- RS-RULER8** 300mm Metric (0.5/1mm)
- RS-RULER12** 1000mm Metric/Imperial



Aluminium Triangle Safety Rule 300mm

RS-RULER13



Faithfull Engineers Square

- HT-SQUARE1** 100mm (4in)
- HT-SQUARE5** 150mm (6in)



Moore & Wright Engineers Square Grade B

- HT-SQUARE4** 100mm (4in)
- HT-SQUARE6** 150mm (6in)



150mm Dial Caliper

HT-CALLIPER10



Mitutoyo 150mm (6") Vernier Caliper with spring loaded thumb lock

HT-CALLIPER11



150mm (6") Carbon Fibre Composite Digital Caliper

HT-CALLIPER12



SPI 150mm (6") Hardened Digital Caliper

HT-CALLIPER13



Mitutoyo 150mm (6") Digimatic Caliper

HT-CALLIPER14



0-25mm Outside Micrometer

0.01mm graduations

HT-MICROMET3



0-150mm Outside Micrometer Set

0.01mm graduations

HT-MICROMET4



Mitutoyo 0-25mm Micrometer

0.01mm graduations

HT-MICROMET5



Mitutoyo 0-25mm Digimatic Micrometer

0.01mm (0.00005") resolution

HT-MICROMET6



SPI Metric Screw Pitch Gauge

HT-GAUGE9

Measuring & Marking Out



Set of 20 Metric Feeler Gauges. Length 100mm.

HT-GAUGE10



Engineers Zeus Book

RS-ZEUSBK1



Spring Dividers

- HT-DIVIDER3 100mm (4")
- HT-DIVIDER4 150mm (6")
- HT-DIVIDER5 200mm (8")
- HT-DIVIDER6 300mm (12")



Inside Spring

- HT-CALLIPER15 100mm (4")
- HT-CALLIPER16 150mm (6")
- HT-CALLIPER17 200mm (8")
- HT-CALLIPER18 300mm (12")



Outside Spring

- HT-CALLIPER19 100mm (4")
- HT-CALLIPER20 150mm (6")
- HT-CALLIPER21 200mm (8")
- HT-CALLIPER22 300mm (12")



SPI Small Toolmakers Surface Gauge Includes 4" & 7" spindles. Base dimensions: length 2-1/4", width 1-5/8", height 7/8"

HT-GAUGE11



SPI Universal Toolmakers Surface Gauge Includes 9" & 12" spindles. Base dimensions: length 3-1/8", width 2-3/8", height 1-1/8"

HT-GAUGE12



Faithfull Jenny (Odd Leg) Caliper 150mm (6")

HT-CALLIPER5



4 Piece Precision Measuring Set Includes: Spring Divider, Inside Caliper, Outside Caliper & 6" Rule.

HT-MEASURE1



6 Piece Precision Measuring Set Includes: Spring Divider, Inside Caliper, Outside Caliper & 6" Rule, 6" Depth Gauge & 5" Pocket Caliper.

HT-MEASURE2



Vee Block & Clamp Set 1/2" Capacity - 1 5/8"(H) x 1 3/4(W) x 2 3/4"(L). Supplied in pairs.

HT-VBLCK2



Dial Test Indicator Stand with Magnetic Base & Fine Adjustment. Base size 63 x 50 x 55mm

HT-DIALTEST1 Stem 176(L) x 12(Dia)mm

HT-DIALTEST2 Stem 225(L) x 16(Dia)mm



Universal Arm Magnetic Steel Base. Fits dovetail, 3/8" or 8mm stem indicators. Fine adjustment knob.

HT-DIALTEST3



Analogue Dial-Test Indicator. Range 25mm, graduations 0.01mm.

HT-DIALTEST4



SPI Digital Dial-Test Indicator with Large LCD Display. Range 25mm, resolution 0.01mm. Stem diameter 8mm. M2.5 Stylus.

HT-DIALTEST5

Measuring & Marking Out



Anvil Helping Hand LED Magnifier Lamp
Incorporates LED illumination, solder reel holder, tip cleaners and a stand for a soldering iron.
MM-LAMPM3



Budget Tape Measure Hi-vis casing.
RS-TAPE9 3m/10ft
RS-TAPE10 5m/16ft



Faithfull Sliding Bevel
HT-BEVEL2 190mm/7.5"
HT-BEVEL3 230mm/9"



Heavy-Duty Combination Square 300mm
Try square, mitre square, depth & marking gauge, stainless steel rule, straight edge, spirit level.
HT-SQUARE7



Stanley Powerlock Tape
RS-TAPE7 3m/10ft
RS-TAPE8 5m/16ft
RS-TAPE11 10m/33ft



Faithfull Aluminium Sliding Bevel
with Stainless Steel Blade 250 mm
HT-BEVEL4



Heavy-Duty Combination Square 300mm
Try square, mitre square, depth & marking gauge, stainless steel rule, straight edge, spirit level, centre head & graduated protractor head.
HT-SQUARE8



Stanley Closed Case Fibre-Glass Tape
30m/100ft
RS-TAPE12



Faithfull Marking Gauge
HT-GAUGE13



Stanley 9" Torpedo Level
HT-SPILEV2



Faithfull Carpenters Try Square
HT-SQUARE9 6in
HT-SQUARE10 9in
HT-SQUARE11 12in



Faithfull Combination Gauge - Screw Adjustment
HT-GAUGE14



Stanley Pro-180 I Beam Level
HT-SPILEV3 Level 2, Vial 600mm
HT-SPILEV4 Level 3, Vial 1000mm



Faithfull Carpenters Mitre Square 10in
HT-SQUARE12



For full class sets of handtools together with storage cupboards see page 217.

Hand Tools / Power Tools

Hand Tools / Power Tools

Cleaning



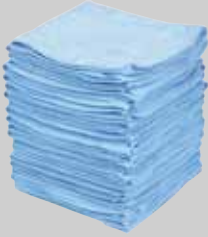
Dustpan and Brush Set Plastic

HT-DUSTPAN2



Soft Coco Wooden Handled Brush 275mm

HT-BRUSH7



Microfibre Cloth, Pack of 50

TMS-LAS-CLOTHS-50



For full class sets of handtools together with storage cupboards see page 217.

Multi Function Tools



Dremel 3000-1/25 Multi Tool. With 25 high quality accessories.

HT-MULTI1



Dremel 4000 (4000-1/45) Multi-Tool. Including Flexshaft attachment and kit of 45 Dremel accessories including EZ SpeedClic.

HT-MULTI2



Bosch GOP12V Multi Functional Tool.

Lightweight cordless variable speed multi-function tool. Sawing, cutting, grinding and scraping all in one. Supplied with a storage box, 2 x batteries, charger and a range of Starlock blades and fittings.

PT-MLT1



Bosch PMF 250 CES Multi Functional Tool, 240V.

Mains powered multi-function with powerful 250 watt motor. Featuring patented Starlock toolholder and AutoClic quick-change system.

PT-MLT2

Routers



Trend 1/4" 850W Variable Speed Router,

240v. Lightweight 850W variable speed plunge router / trimmer. Supplied with kit box. Suitable for tooling up to 1/4"

MM-ROUTER4



Trend T11EK 1/2" Variable Speed Plunge

Router, 240V . Professional duty workshop router with Quick Raiser, fine adjuster, electronic variable speed control and soft start. Suitable for tooling up to 1/2".

MM-ROUTER2

Electric Saws



Bosch PKS-16 Multi Mini Hand-held Circular Saw. All the precision of regular circular saws but smaller, lighter and more compact. Lowerable saw blade allows easy and safe plunge cuts up to 16mm.

PT-SAW1



Bosch GST 10.8 V-Li Professional Lightweight Jigsaw. Extremely compact and lightweight 12 volt professional cordless jigsaw.

PT-SAW2



Bosch PST 700 E Lightweight Compact Jigsaw, 240V. Compact mains powered jigsaw with trigger controlled stock-rate and Bosch low vibration technology.

PT-SAW3

Electric Screwdrivers



Bosch IXO-V Cordless Screwdriver. Ergonomic lightweight cordless screwdriver with micro USB connection for easy charging.

PT-DRV1



Bosch PSR Select 3.6V-Li Cordless Screwdriver. Lightweight cordless screwdriver with integrated cylinder holding 12 standard bits.

PT-DRV2

Angle Grinder



Bosch GWS 7-115 115mm Angle Grinder, 240V. Lightweight yet powerful 720W angle grinder with small grip size for safety and comfort.

PT-GND1

Electric Drills



Bosch PSB 1800 Li-2 18V Drill, supplied with 2 batteries. Powerful cordless combi drill with 2-speed planetary gearbox.

PT-DRL1



Bosch GSB12V15 12v 2x2.0Ah Li-ion Cordless Combi Drill. Lightweight and compact 12v hammer drill with softgrip for comfort, joblight for visibility auto-lock 10mm chuck.

PT-DRL2



Bosch GSB 18-2 Li Plus Professional Cordless Combi Drill. Professional lightweight and ergonomic combi drill with keyless 13mm chuck, motor brake and variable speed trigger.

PT-DRL3



Bosch GSB 13 RE 240v Percussion drill - 13mm keyless chuck. Compact lightweight professional duty corded impact drill, 240V.

PT-DRL4



Bosch PSS 200A Orbital Sander, 240V. The ideal solution for high-quality surface finishes over large areas. Powerful 200W motor and 92 x 182mm sanding surface.

PT-SND3

Heat Guns



Bosch PHG 600-3 Heat Gun, 240V. A compact yet powerful 1800W heat gun with 3 temperature settings and air-flow speeds.

PT-HTG1

Electric Sanders



Bosch 18V Cordless Multi-Sander. Compact, powerful cordless sander, great for hard-to-reach areas and on small surfaces.

PT-SND1



Bosch PEX 220 A Random orbit sander, 240V. Compact high-performance mains powered random-orbit sander with built-in dust extraction element.

PT-SND4



Bosch PKP 18 E Glue Gun, 240V. Robust hot glue gun with electronically controlled heating element. Mechanical feed system with integral drip-lock and extra long nozzle.

PT-HTG2



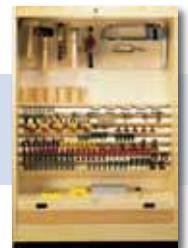
Bosch PBS-75A Belt sander, 240V. Powerful 710W professional duty belt sander with optimised ergonomics and compact design.

PT-SND2



Silverstorm 13mm Power Belt File, 240V. Electric belt sander with narrow, file-like sanding belt, adjustable file arm angle and variable speed control.

PT-PBF1



For full class sets of handtools together with storage cupboards see page 217.

TechSoft CAD/CAM Workstations

TechSoft CAD/CAM Workstations



Shown here with RotoCAMM MDX-40AE and computer (supplied separately).

Creating appropriate workspaces with the right equipment levels is a familiar challenge for Design and Technology teachers, and particularly so when it comes to CAD/CAM equipment. Duplicating resources between rooms might be ideal, but most schools would struggle to find space or the budget to do this. Some schools have been able to develop a central CAD/CAM hub and others place key CAD/CAM resources in areas where all students will, at some point, be timetabled. Both strategies have their merits but a third is to move equipment to where it is needed, when it is needed. This flexible approach will, in addition, enable schools to quickly adapt teaching rooms in sympathy with curriculum developments.

To meet these needs, TechSoft have developed a range of workstations, each of which has been carefully designed to provide a complete, portable, 'Plug and Play' resource. The units are constructed for strength and smart appearance, and feature double-skin carcasses in key areas. Surfaces are selected for durability, and thick edge-lippings will help preserve appearances despite inevitable classroom knocks. The workstations move smoothly on lockable industrial grade castors.

All worktops are large enough for any TechSoft desktop-format CAM machine and a computer. Lockable cupboards contain a generous selection of trays for tooling, materials and space for a PC unit. Storage space is carefully configured to suit the designated application and, in the case of the milling/routing workstation, space for the included vacuum extractor. Mushroom-headed push-stop buttons with key-switch release, control the operation of the machine and extraction power outlets. Power status indicators allow a quick visual check if the machine is operational. The key-switch does not cut power to the PC, so work will not be lost. This gives the teacher flexible control over the use of the equipment. Where appropriate, an auto-switched outlet for the extraction system is provided, this also has a manual override for cleaning down. Cable management systems ensure safe, tidy and reliable performance. All extraction units provided, have external ventilation of the exhaust to prevent overheating.

Power Requirements: 240V, 13A Socket

TechSoft Miller/Router Workstation



Simply add a PC and a TechSoft/Roland SRM-20E/MDX-40AE/EGX-350E (pages 65-68), and you're ready to go. The unit is fully-wired with key-switch control of the machine and the extraction unit. The extractor is included and will auto-run on MDX-40A & EGX-350E machines. Manual switching can be used with other models and for cleaning down. Status indicators monitor the built-in power sockets and these include power for the PC. The PC socket is not controlled by the stop button / key switch so work will not be lost. Central storage trays will accommodate a generous supply of materials and securely store all the necessary tooling.

Prices £		*See Pricing Information on page 2
TF-WS3-C1	TechSoft Mobile Workstation for Milling, 1400x800x850mm c/w underbench cupboards containing in-built sockets, auto-switched extractor with manual override, Gratnell trays and storage space for computer.	

TechSoft Knife Cutting Workstation



The spacious worktop provides room for handling sheet or roll material for any TechSoft knife cutter up to and including the Roland CAMM 1 GS-24E (see page 34). Lockable storage space includes a PC bay, shelving for sheet material and drawers for several 500mm rolls of vinyl. The unit is fully-wired with key-switch control of machine power and one additional socket – possibly for use with a printer. Status indicators monitor the built-in power sockets and these include power for the PC. The PC socket is not controlled by the stop button / key switch so work will not be lost.

Prices £		*See Pricing Information on page 2
TF-WS3-C2	TechSoft Mobile Workstation for Knife Cutting, 1400x800x850mm c/w underbench cupboards containing in-built sockets, drawers, shelves and storage space for computer.	

TechSoft Embroidery Workstation



This workstation comfortably accommodates a multi-needle embroidery machine (see pages 104-105) and computer. Priority has been given to storage for materials and the numerous small accessories needed for these machines. In this format, the workstation is effectively a multi-purpose unit that could be used for any number of applications. The unit is fully-wired with key-switch control of machine power and one additional socket. Status indicators monitor the built-in power sockets and these include power for the PC. The PC socket is not controlled by the stop button / key switch so work will not be lost.

Prices £*		*See Pricing Information on page 2
TF-WS3-C2	TechSoft Mobile Workstation for Embroidery, 1400x800x850mm <i>c/w underbench cupboards containing in-built sockets, drawers, shelves and storage space for computer.</i>	

TechSoft Image Transfer Workstation



Laser Image Transfer (see pages 118-119) or Sublimation Printing (see page 120-121) requires a PC, printer, heat press and a selection of specialist materials. This workstation has been configured to provide separate key-switch operation of the heat press and printer. The key-switches do not cut power to the PC, so work will not be lost. Secure storage space is included for specialist materials that must not be allowed to become muddled with general print media.

Prices £*		*See Pricing Information on page 2
TF-WS3-C2	TechSoft Mobile Workstation for LIT, 1400x800x850mm <i>c/w underbench cupboards containing in-built sockets, drawers, shelves and storage space for computer.</i>	

TechSoft Wheeled Stand/Cupboard

uPrint 3D Printer Wheeled Stand/Cupboard



The ideal partner for a uPrint 3D Printer which matches our other workstations in height, depth and appearance. This sturdily built unit has been designed specifically to present the printer at a convenient height so that students can see work in progress. The cabinet interior is furnished to store materials and to house all the maintenance and service tools supplied with the machine. Industrial grade locking castors and secure location of the printer feet allow the 3D Printer to be wheeled between rooms when needed.

Prices £*		*See Pricing Information on page 2
TF-WS4-C1	Wheeled Stand/Cupboard for uPrint or HP Designjet 3D Printer (700x800x850mm)	

Multi Purpose Wheeled Stand/Cupboard



This sturdily built unit has industrial grade locking castors allowing it to be wheeled between rooms when needed. The unit does not include power or cable management, but will match our workstation range as part of a set of flexible resources within a department. The interior has one shelf and two drawers providing ample storage for accessories and materials.

Prices £*		*See Pricing Information on page 2
TF-WS4-C2	Multi-Purpose Wheeled Stand/Cupboard (700x800x850m)	

TechSoft Machine Stands

These robust machine stands are suitable for single machine installation in a permanent workshop layout. Although not portable as such, their modular nature means that changing workshop layouts could be achieved for minimal expense, particularly if the initial provision of power in the room takes these units into account. The machine stands are available with locking underbench cupboards that include a single shelf for storing tools and accessories.

Machine Stands are supplied without machines, but do include an extraction unit where indicated. The machine and any switches provided will need professionally wiring to a suitable isolator. Two configurations are available.

Machine Stand / Machine Stand with Optional Cupboard



SF-STAND4

SF-STAND5

SF-STAND7

SF-WB15-M1

These units will accommodate a bench drill or any other bench-top machine (see examples below).

Prices £*	*See Pricing Information on page 2	
SF-STAND4	Lervad Machine Bench, 600x600x790mm, Solid Beech Top	
SF-STAND5	Machine Bench, 700x600mm, adjustable height, MPX Top	
SF-STAND7	Machine Bench, 700x600mm, adjustable height, MPX Top with underbench cupboard containing shelf	
SF-WB15-M1	Bott Cubio Workstand 750 x 750 x 840mm. MPX Worktop	

Machine Stand with Extraction

This stand includes an auto-switching extraction unit. This configuration has been created specifically for use with a fretsaw (see example below).



Prices £*	*See Pricing Information on page 2	
MM-EXTRACT104P1	TechSoft Fretsaw Workstation 750 x 750 x 840mm. Excluding Fretsaw but complete with auto-switching Mobile Extractor (order fretsaw and footswitch separately)	



See page 158



See page 153

TechSoft Machine Workstations



Shown here with Optimum Drill supplied separately (see page 158).

A TechSoft workstation provides an ideal base for additional small machine tools that will allow them to be shared between rooms as timetables and project work demands. Each workstation features industrial quality locking castors for security once the unit is in place. Mushroom-headed push-stop buttons with key-switch release, control the operation of the machine and extraction power outlets. Power status indicators allow a quick visual check if the machine is operational. The Machine Workstation ensures that not only the machine, but all the necessary switches and wiring requirements, move with it.

Machines are not included with these units. If ordered complete with a machine from TechSoft, this will be fully installed before delivery for a true plug and play solution.

Machine Workstation with Foot-stop

This unit will accommodate a bench drill, small metal lathe or bench-top milling machine and includes a latching foot-stop to ensure full compliance with safety regulations. Storage space below includes Gratnell trays for tooling, accessories and general use.

Prices £*	*See Pricing Information on page 2	
TF-WS3-C4	*TechSoft Mobile Workstation for Workshop Machines, 1400x800x850mm c/w footstop, underbench cupboards containing in-built sockets, Gratnell trays and storage space.	

*N.B. Legacy or customer supplied equipment will require professional installation at additional cost. TechSoft supplied new machines will be fully installed before delivery.

Premium Quality Hexagonal Workbench



Premium Quality Hexagonal Workbenches

These high quality hexagonal workbenches offer flexibility and space saving advantages for workshops, whilst still providing adequate individual space for practical work. The shape of the benches makes them ideal as planning tables for design and group work.

Unique Beech Worktops

The beech worktop is in two parts – the outer hexagonal part is 1600mm across the flats, the inner hexagonal part is just 1000mm across the flats. The inner part can be inserted either way up to give the choice of a completely flush bench surface, or a central recess to provide a useful tool well.

The beech worktop is unique and has been specially designed to reduce any warping which can otherwise occur where benches are to be used in hot climates or need to be shipped in sea containers. The 40mm premium quality solid beech has an additional 30mm lipping.

A phenolic top alternative is available to provide a multi-purpose workbench, ideal where a significant amount of metalwork is to take place.

Powder-Coated Steel Frame

The powder-coated steel frame is part welded and part bolt-together for ease of transport and installation. The legs have an adjustable steel footplate with a protective rubber footpad which can be used to level the workbench, even on very uneven floors.

Optional Large Under-Cupboard

An optional under-cupboard is available which fits neatly under the bench. It has a shelf and lockable double doors on two sides, thus creating a large storage area under the bench. The cupboard is made from 18mm MFC with matching ABS edging.

Vices

Each beech top workbench is supplied with six high quality 7" Spear and Jackson Eclipse quick-release woodworking vices fitted with beech jaws. These can be fitted with 'Piggyback' metalwork vices (supplied separately) if required. The phenolic top workbench comes with a choice of woodwork and/or metalwork vices.

Prices £* *See Pricing Information on page 2

Prices £*		
Beech Top		
SF-WB94W	Hexagonal Workbench (without under bench cupboard) c/w 6 x 7" quick release woodwork vices. Solid beech top with reversible tool well	
SF-WB94A	Large 18mm Beech under bench cupboard with locking doors at opposite ends, centre divider and adjustable height shelf. Also includes one pair of triangular side shelves	
MTB-VICE3	'Piggyback' Metalwork 3" vice	
Multi Purpose Phenolic Top		
SF-WB95	Hexagonal Craftwork Bench (without the under-cupboard). Phenolic top for multi-material use.	
SF-WB95A	Large Two Tone Grey under bench cupboard with locking doors at opposite ends, centre divider and adjustable height shelf. Also includes one pair of triangular side shelves.	
SF-WB95W	Hexagonal Craftwork Bench (without the under-cupboard) c/w 6 x 7" Woodwork Vices. Phenolic top for multi-material use.	
SF-WB95M	Hexagonal Craftwork Bench (without the under-cupboard) c/w 6 x EMV3 4" Metalwork Vices. Phenolic top for multi-material use.	
SF-WB95WM	Hexagonal Craftwork Bench (without the under-cupboard) c/w 3 x 7" Woodwork Vices and 3 x EMV3 4" Metalwork Vices. Phenolic top for multi-material use.	

Nortek Technology Workbenches

Nortek Craftwork 1000 / Height Adjustable Workbench



SF-WB1WM

This cost effective multi-media bench system uses the same fully welded heavy duty tubular steel framework as the Craftwork 2000. It has a unique textured phenolic plastic coated top. Available in three configurations; for woodwork alone with four 180mm quick release woodwork vices, for multi-media with two wood and two metalwork vices and for metalwork with four 100mm metalwork vices. The epoxy powder-coated steel framework can be finished in a number of colours, but light grey is supplied as standard.

Optional Underbench Cupboards

There are two sizes of underbench cupboard available. Both are lockable and can be used for the secure storage of tools, project work or materials. The cupboard fits over the base 'X' frame and is double sided having hinged doors on both sides providing two separate storage compartments.



SF-WB1WM + SF-WB1A

The smaller cupboard (shown here) allows pupils to sit comfortably when the benches are used for alternative applications, eg., design work.

Height Adjustable Multi-Materials Workbench



SF-DESK4

This height adjustable workbench has a tough phenolic plastic coated top and is fitted with one woodwork and one metalwork vice. The base is fitted with fixing plates so that the workbench can be secured to the floor.

1200(W) x 600(D) x 670-970(H)mm

Prices £*		*See Pricing Information on page 2
SF-WB1W	Craftwork 1000 Multi-media Bench with 4 woodwork vices (1200 x 1200 x 810mm)	
SF-WB1WM	Craftwork 1000 Multi-media Bench with 2 wood & 2 metalwork vices (1200 x 1200 x 810mm)	
SF-WB1M	Craftwork 1000 Multi-media Bench with 4 metalwork vices (1200 x 1200 x 810mm)	
SF-WB1A	Legroom Underbench Cupboard for Craftwork 1000 (in grey and charcoal with trays)	
SF-WB1AT	Alternative Slide-out Tool Rack for SF-WB1A	
SF-WB1B	Double Sided Full Sized Underbench Cupboard for Craftwork 1000 (in grey and charcoal)	
SF-DESK4	Special Needs Multi Materials Workstation c/w woodwork vice and metalwork vice (1200 x 600 x 670-970mm)	

Nortek Craftwork 2000



SF-WB10

This woodworking bench offers a handsome and strong combination of traditional beech and steel. The work surface is constructed from 40mm thick solid beech with additional 30mm lipping. A central recess accepts a rigid 600mm x 600mm beech framed tray. This serves either to create a completely flush bench surface, or reverses to provide a useful tool well. Each bench has a fully welded tubular steel framework with "X" frame stiffening. 75mm diameter legs terminate with round steel-plates for floor-fixing if required. The epoxy powder-coated steel framework can be finished in a number of colours, but light grey is supplied as standard.

Benches are supplied with four heavy-duty woodwork vices. Each vice has solid beech fitted jaws and an integral machined steel, adjustable bench stop.

Optional Underbench Cupboards

Two sizes of underbench cupboard are available. Both are lockable and can be used for the secure storage of tools, project work or materials. Cupboards fit over the base 'X' frame and have doors fitted to both sides to create two separate storage compartments.



SF-WB10 +
SF-WB10A +
4 MTB-VICE3

The smaller cupboard (shown here) allows pupils to sit comfortably when the benches are used for alternative applications, eg., design work.

Prices £*		*See Pricing Information on page 2
SF-WB10	Craftwork 2000 Woodworking Bench with 4 woodwork vices (1200 x 1200 x 815mm)	
SF-WB10A	Legroom Underbench Cupboard for Craftwork 2000 (woodgrain finish with trays)	
SF-WB10AT	Alternative Slide-out Tool Rack for SF-WB10A	
SF-WB10B	Double Sided Full Size Underbench Cupboard for Craftwork 2000 (woodgrain finish)	
MTB-VICE3	Nortek, 'Piggyback' Metalwork 3" vice	
SF-TROLLEY9	Vice Transport Trolley (Holds 12 piggyback metalwork vices)	
SF-RACKSTOR15	Nortek Fixed Metalwork Vice Rack, 1126 x 585mm (Floor fixed. Holds 24 piggyback metalwork vices)	
SF-RACKSTOR16	Nortek Metalwork Vice Rack with 3 drawers, 1126 x 585mm (Floor fixed. Rack holds 24 piggyback metalwork vices)	
SF-RACKSTOR15A	Upper Tool Storage Panel for SF-RACKSTOR15/16 (Fits into the top of the vice rack and can be fitted out with hook kits, see page 219)	

Lervad Technology Workbenches

Lervad Well Top Square Workbench



SF-WB55-BH +
SF-WB52-SH +
4 MTB-VICE11
(Stools not included.)

The Lervad Well Top Workbench has a 40mm thick solid beech top with a central recess in the worksurface which accepts a beech framed tray. This acts as a tool well or reverses to fit flush with the worksurface.

Optional Underbench Shelf/Cupboards

Benches can be supplied with a lower shelf or a lockable cupboard for the secure storage of tools and materials.

SF-WB56-BH +
4 MTB-VICE11
(Stools not included.)



Height Adjustable Well Top Workbench



SF-WB57-BA +
4 MTB-VICE11
(Stools not included.)

This height adjustable work bench (680-960(H)mm) has a solid beech top with a central recess, and can be fitted with woodwork or metalwork vices. The legs are fitted with fixing plates so that the workbench can be secured to the floor.

Prices £*	*See Pricing Information on page 2	
SF-WB55-BH	Lervad Well Top Workbench, 1200 x 1200 x 830mm, 40mm solid beech top	
SF-WB52-SH	Under Shelf for SF-WB55	
SF-WB56-BH	Lervad Well Top Workbench with integrated cupboard, 1200 x 1200 x 830mm, 40mm solid beech top	
SF-WB57-BA	Lervad Height Adjustable Well Top Workbench, 1200 x 1200 x 680-960mm, 40mm solid beech top	
MTB-VICE11	Record Woodwork Vice V175 fitted with solid beech jaws to Lervad Workbench	
MTB-VICE17	Record No. 1 Mechanics Vice, 75mm (3") jaw width, opening 90mm, with vice holder to mount onto Lervad flush top workbenches	
MTB-VICE15	Record No. 3 Mechanics Vice, 100mm (4") jaw width, opening 120mm fitted to Lervad workbench	

Lervad Flush Top Square Workbench



SF-WB52-BH +
SF-WB52-SH +
4 MTB-VICE11
(Stools not included.)

This handsome bench features solid beech construction throughout and a solid 40mm beech top. To aid transportation, the solid top is supplied in two sections which bolt firmly and accurately together. Once assembled to the frame, this bench is heavy and provides a very stable work platform.

Optional Underbench Shelf/Cupboards

Benches can be supplied with a lower shelf or a lockable cupboard for the secure storage of tools and materials.

SF-WB53-BH +
4 MTB-VICE11
(Stools not included.)



Height Adjustable Flush Top Workbench



SF-WB54-BA +
4 MTB-VICE11
(Stools not included.)

This height adjustable work bench has a solid beech top and telescopic steel legs that provide height adjustment from 640 – 920mm. Legs are fitted with steel plates to allow fixing to the floor if required. These benches can be fitted with woodwork or metalwork vices.

Prices £*	*See Pricing Information on page 2	
SF-WB52-BH	Lervad Flush Top Workbench, 1200 x 1200 x 830mm, 40mm solid beech top	
SF-WB52-SH	Under Shelf for SF-WB52	
SF-WB53-BH	Lervad Flush Top Workbench with integrated cupboard, 1200 x 1200 x 830mm, 40mm solid beech top	
SF-WB54-BA	Lervad Height Adjustable Flush Top Workbench, 1200 x 1200 x 680-960mm, 40mm solid beech top	
MTB-VICE11	Record Woodwork Vice V175 fitted with solid beech jaws to Lervad workbench	
MTB-VICE17	Record No. 1 Mechanics Vice, 75mm (3") jaw width, opening 90mm, with vice holder to mount onto Lervad flush top workbenches	
MTB-VICE15	Record No. 3 Mechanics Vice, 100mm (4") jaw width, opening 120mm fitted to Lervad workbench	

Lervad Technology Workbenches

Lervad Flush Top Rectangular Workbench



These sturdy workbenches are available in 1200mm and 1500mm width. They are ideal where space is tight or for use as demonstration benches. Each comes with a 40mm solid beech top.

SF-WB39-BH +
2 MTB-VICE11 (Stools
not included.)

Optional Underbench Shelf/Cupboards

Benches can be supplied with a lower shelf or a lockable cupboard for the secure storage of tools and materials.

SF-WB43-BH +
2 MTB-VICE11



Prices £*		*See Pricing Information on page 2
1200mm Wide:		
SF-WB42-BH	Lervad Flush Top Workbench, 1200 x 750 x 830mm	
SF-WB42-SH	Under Shelf for SF-WB42	
SF-WB43-BH	Lervad Flush Top Workbench with integrated cupboard, 1200 x 750 x 830mm	
SF-WB44-BA	Lervad Height Adjustable Flush Top Workbench, 1200 x 750 x 680-960mm	
1500mm Wide:		
SF-WB39-BOH	Lervad Flush Top Workbench, 1500 x 750 x 830mm	
SF-WB39-SH	Under Shelf for SF-WB39	
SF-WB40-BOH	Lervad Flush Top Workbench with integrated cupboard, 1500 x 750 x 830mm	
SF-WB45-BOA	Lervad Height Adjustable Flush Top Workbench, 1500 x 750 x 680-960mm	
Optional Vices:		
MTB-VICE11	Record Woodwork Vice V175 fitted with solid beech jaws to Lervad workbench	
MTB-VICE17	Record No. 1 Mechanics Vice, 75mm (3") jaw width, opening 90mm, with vice holder to mount onto Lervad flush top workbenches	

Lervad Metalwork Bench (4 seat)



This Metalwork bench has an extremely sturdy construction and a 40mm thick solid beech top with two protective steel rails. The bench is fitted with four (100mm) metal work vices as standard.

SF-WB49-BHRH +
SF-WB49-SH

Optional Underbench Shelf/Cupboard

Benches can be supplied with a lower shelf or a lockable cupboard.

Prices £*		*See Pricing Information on page 2
SF-WB49-BHRM	Lervad Flush Top Workbench, 1800 x 900 x 830mm, 40mm solid beech top with 2 protective steel rails and 4 mechanics vices (100mm)	
SF-WB49-SH	Under Shelf for SF-WB49	
SF-WB50-BHRM	Lervad Flush Top Workbench with integrated cupboard, 1800 x 900 x 830mm, 40mm solid beech top with 2 protective steel rails, and 4 mechanics vices (100mm)	
SF-WB51-BARM	Lervad Height Adjustable Flush Top Workbench, 1800 x 900 x 680-960mm, 40mm solid beech top with 2 protective steel rails and 4 mechanics vices (100mm)	

Lervad Side Benching



Open Frame Side Benches

These side benches have a 30mm solid beech top. They are available in two widths, 900mm and 1760mm, two depths, 600 and 750mm and two heights 790mm and 830mm.

Prices £*		*See Pricing Information on page 2
900mm Wide:		
SF-WB61-BL	Lervad Open Frame Side Bench, 900 x 600 x 790mm	
SF-WB61-BH	Lervad Open Frame Side Bench, 900 x 600 x 830mm	
SF-WB63-BL	Lervad Open Frame Side Bench, 900 x 750 x 790mm	
SF-WB63-BH	Lervad Open Frame Side Bench, 900 x 750 x 830mm	
1760mm Wide:		
SF-WB65-BL	Lervad Open Frame Side Bench, 1760 x 600 x 790mm	
SF-WB65-BH	Lervad Open Frame Side Bench, 1760 x 600 x 830mm	
SF-WB67-BL	Lervad Open Frame Side Bench, 1760 x 750 x 790mm	
SF-WB67-BH	Lervad Open Frame Side Bench, 1760 x 750 x 830mm	



Side Benches with Cupboards

These side benches have a 30mm solid beech top and cupboard underneath. They are available in two widths, 900mm and 1760mm, two depths, 600 and 750mm and two heights 790mm and 830mm.

Prices £*		*See Pricing Information on page 2
900mm Wide:		
SF-WB62-BL	Lervad Side Bench with Cupboard, 900 x 600 x 790mm	
SF-WB62-BH	Lervad Side Bench with Cupboard, 900 x 600 x 830mm	
SF-WB64-BL	Lervad Side Bench with Cupboard, 900 x 750 x 790mm	
SF-WB64-BH	Lervad Side Bench with Cupboard, 900 x 750 x 830mm	
1760mm Wide:		
SF-WB66-BL	Lervad Side Bench with Cupboard, 1760 x 600 x 790mm	
SF-WB66-BH	Lervad Side Bench with Cupboard, 1760 x 600 x 830mm	
SF-WB68-BL	Lervad Side Bench with Cupboard, 1760 x 750 x 790mm	
SF-WB68-BH	Lervad Side Bench with Cupboard, 1760 x 750 x 830mm	

Seating

Alpha Stac Tek Stool

Designed for education these stools have a laminated beech dished seat with a waterfall front for added comfort. The 'skid base' frame allows the stools to be stacked six high or hung on a table top.



Prices £*		*See Pricing Information on page 2
SF-STOOL9	Alpha Stac Tek Stool, with footrest. Seat height 460, 560, 610 or 660mm.	

Alpha Stac Tek Stool with backrest

This is essentially an Alpha Stac Tek stool with a backrest. Ideal where students will be seated for extended periods of time. The 'skid base' frame allows the stools to be stacked four high or hung on a table top.



Prices £*		*See Pricing Information on page 2
SF-STOOL9A	Alpha Stac Tek Stool with Backrest. Seat height 560, 610 or 660mm.	

Nortek Super Stool

Superstools have an extremely durable construction with a double panelled breathing polypropylene seat. Stools can be stacked or hung on a table top.



Prices £*		*See Pricing Information on page 2
SF-STOOL1-C	Nortek Super Stool with Chrome Legs. 370 x 370mm. Seat height 460, 560 or 610mm.	
SF-STOOL1-S	Nortek Super Stool with Metallic Silver Legs. 370 x 370mm. Seat height 460, 560 or 610mm.	

Nortek Super Stool with Backrest

Ideal where students will be seated for longer periods of time. Stools can be stacked or hung on a table top.



Prices £*		*See Pricing Information on page 2
SF-STOOL1A-C	Nortek Super Stool with Chrome Legs and Backrest. Seat height 460, 560 or 610mm.	
SF-STOOL1A-S	Nortek Super Stool with Metallic Silver Legs and Backrest. Seat height 460, 560 or 610mm.	

Beech Stool

Traditional wooden stool, made from solid beech using glued and pinned mortice and tenon joints for lasting strength.



Prices £*		*See Pricing Information on page 2
SF-STOOL8	Beech Stool. Seat height 560mm.	

Basic Glide Chair

A welded oval tubular steel frame with shaped plywood seat and back. Available in clear varnish or a range of colours. Chairs can be stacked or hung on a desktop.



Prices £*		*See Pricing Information on page 2
SF-CHAIR12	Basic Glide Chair. Seat height 460mm.	

LuPo-Glide Chair

An ergonomically shaped polypropylene perforated air cushion seat with welded oval tubular steel frame. Chairs can be stacked or hung on a desktop.



Prices £*		*See Pricing Information on page 2
SF-CHAIR1	LuPo Glide Chair. Seat height 460mm.	

LuPo-Turn Chair

This is a mobile version of the LuPo-Glide Chair above.



Prices £*		*See Pricing Information on page 2
SF-CHAIR14A	Lupo-Turn Height Adjustable Swivel Chair with Castors. Seat height 450-550mm.	
SF-CHAIR14B	Lupo-Turn Height Adjustable Swivel Chair with Glides. Seat height 420-520mm.	

Millennium Project Tables

The popular and versatile Millennium Project Table and Pupil Desk range has a heavy duty fully welded tubular steel framework using 50mm diameter legs and 60 x 20mm top support members. Individual units can be used together to form work tables that maximise the use of available space.



Available in either 725mm or 825mm heights - Please specify with order.

Prices £*		*See Pricing Information on page 2
SF-TABLE2	Square Table 1200 x 1200 x 725/825mm	
SF-TABLE12	Rectangular Table 1200 x 600 x 725/825mm	
SF-TABLE13	Rectangular Table 1500 x 600 x 725/825mm	
SF-TABLE14	Rectangular Table 1800 x 600 x 725/825mm	
SF-TABLE11	Rectangular Table 1500 x 1200 x 725/825mm	
SF-TABLE3	Rectangular Table 2400 x 1200 x 725/825mm	

Round Ended Table

Various sizes of round-ended project tables are available. They can be used individually or in combination with rectangular tables to form shapes and sizes that suit specific requirements.



Available in either 725mm or 825mm heights - Please specify with order.

Prices £*		*See Pricing Information on page 2
SF-TABLE15	Round End Table 900 x 1200 x 725/825mm	
SF-TABLE16	Round End Table 1200 x 1200 x 725/825mm	
SF-TABLE4	Round End Table 1500 x 1200 x 725/825mm	
SF-TABLE5	Round End Table 1800 x 1200 x 725/825mm	

Quadrant Table

Quadrant tables can be used to make learning spaces interesting and fun. When combined together or with rectangular units they produce a multitude of practical configurations or can produce a variety of shapes when combined with any of the other millennium project tables.



Available in either 725mm or 825mm heights - Please specify with order.

Prices £*		*See Pricing Information on page 2
SF-TABLE17	90° Quadrant 1000 x 600 x 725/825mm	

Triangular Table

Equilateral triangular tables can be used as corner connector tables for project tables used against walls, or can produce a variety of shapes when combined with any of the other millennium project tables.



Available in either 725mm or 825mm heights - Please specify with order.

Prices £*		*See Pricing Information on page 2
SF-TABLE6	Triangular Table 1200 (sides) x 725/825mm	

Alpha Tables

30mm beech laminate top with lacquered solid beech edges and silver cantilever underframe. Matches Alpha StacTek stools (see page 212).

Prices £*		*See Pricing Information on page 2
SF-TABLE18-SS710	Alpha Table (600x600x710mm)	
SF-TABLE18-DS710	Alpha Table (1200x600x710mm)	
SF-TABLE18-SS710T	Alpha Table with Tray (600x600x710mm)	
SF-TABLE18-SS760T	Alpha Table with Tray (600x600x760mm)	
SF-TABLE18-DS710T	Alpha Table with 2 Trays (1200x600x710mm)	
SF-TABLE18-DS760T	Alpha Table with 2 Trays (1200x600x760mm)	
SF-TABLE19-S	Height Adjustable Table (700x700x710-840mm)	
SF-TABLE19-D	Height Adjustable Table (1400x700x710-840mm)	
SF-TABLE20-S	Height Adjustable Table (600x600x640,710,760mm)	
SF-TABLE20-D	Height Adjustable Table (1200x600x640,710,760mm)	
SF-TABLE20-ST	Height Adjustable Table with Tray (600x600x640,710,760mm)	
SF-TABLE20-DT	Height Adjustable Table with 2 Trays (1200x600x640,710,760mm)	

Cantilever Workstations

Cantilever Workstations provide a smart and long-lasting furniture solution for general teaching areas and Technology rooms in particular. Units are modular in nature and based on 1200, 1500 or 1800mm lengths and 600 or 800mm work surface depths. Used with matching corner units and under-bench cupboards you will have the building blocks and flexibility to furnish almost any teaching space. To provide a bespoke solution, the basic Workstation is just the beginning. Sharing the same modular dimensions, a range of accessories now becomes available to create a custom teaching space for a wide variety of Technology teaching options.

ICT and Computing

A range of cable management options, monitor stands and CPU trays securely fasten to the workstation to provide a smart and ergonomically sensitive solution for all types of computer-based work.

See page 215 for full details

PECT – Pneumatics, Electronics and Control Technology

The on-bench facilities are all based around a modular trunking unit that fastens to the back edge of the workstation.



There are almost endless permutations of what facilities (and combinations of facility) can be selected but, in essence, options are based on the following:

- 240V sockets
- Fixed 5V DC protected power supply via standard 4mm sockets
- Dual rail protected power supply in stepped increments from 5V to 15V DC.
- Dual rail protected power supply adjustable from 5V to 15V DC. with integral analogue metering.
- Compressed air outlet for pneumatics work.
- 24V soldering iron supply.
- Solder fume extraction ports.
- RJ45 network ports.

See Electronics section page 92 for full details

Height Adjustable PECT Workstation



This 1200 x 750mm workstation is fitted with MPLV mains/low voltage trunking with a 24V soldering iron supply. The workstation can also have additional fume extraction trunking added which can be connected to a suitable extraction unit.

See Electronics section page 92 for further options

Prices £*		*See Pricing Information on page 2
SF-DESK5	Special Needs PECT Workstation 1200 x 750 x 670-970mm	

Basic Workstation



SF-DESK2G

Optional Underbench Cupboards

This underbench cupboard is designed to fit the 1500 x 800mm version of the Cantilever Workstation (above) and provides a general storage facility for a wide range of applications, while still providing ample leg room even for adults. They are produced in two configurations, the SF-DESK2GCS has shelves and the SF-DESK2GCT is supplied with 20 trays.



SF-DESK2G + SF-DESK2GCS

Height Adjustable Workstation



SF-DESK3 shown with
Walton Drawing Board

This height adjustable workstation allows access for all students and should be considered for inclusion in all work areas. The height of the work surface can be adjusted from 670mm to 970mm high using a removable winding handle.

Prices £*		*See Pricing Information on page 2
SF-DESK2A	Cantilever Workstation 900 x 600 x 725mm	
SF-DESK2B	Cantilever Workstation 1200 x 600 x 725mm	
SF-DESK2C	Cantilever Workstation 1500 x 600 x 725mm	
SF-DESK2D	Cantilever Workstation 1800 x 600 x 725mm	
SF-DESK2E	Cantilever Workstation 900 x 800 x 725mm	
SF-DESK2F	Cantilever Workstation 1200 x 800 x 725mm	
SF-DESK2G	Cantilever Workstation 1500 x 800 x 725mm	
SF-DESK2H	Cantilever Workstation 1800 x 800 x 725mm	
SF-DESK2ARCT	Round Corner Table, 800 x 800 x 725mm for 600mm deep SF-DESK2A/B/C/D	
SF-DESK2ERCT	Round Corner Table, 1000 x 1000 x 725mm for 800mm deep SF-DESK2E/F/G/H	
SF-DESK2GCS	Underbench Cupboard with Shelves for SF-DESK2G only	
SF-DESK2GCT	Underbench Cupboard with Trays for SF-DESK2G only	
SF-DESK3	Special Needs Height Adjustable Workstation 1200 x 750 x 670-970mm	

Computer Workstations



SF-DESK11H
+ SF-DESK-CPU1
+ SF-DESK-MS1.
(Computers not included)

Smart and robust workstations that represent an effective standard for ICT furniture. Each features comprehensive cable management and clever design details for flexible, modular arrangement. Optional adjustable monitor stands and lower CPU cradles can be added for a complete solution.

Prices £*		*See Pricing Information on page 2
With Standard Metalwork		
SF-DESK11A	Infotech Computer Workstation 900 x 600 x 725mm	
SF-DESK11B	Infotech Computer Workstation 1200 x 600 x 725mm	
SF-DESK11C	Infotech Computer Workstation 1500 x 600 x 725mm	
SF-DESK11D	Infotech Computer Workstation 1800 x 600 x 725mm	
SF-DESK11E	Infotech Computer Workstation 900 x 800 x 725mm	
SF-DESK11F	Infotech Computer Workstation 1200 x 800 x 725mm	
SF-DESK11G	Infotech Computer Workstation 1500 x 800 x 725mm	
SF-DESK11H	Infotech Computer Workstation 1800 x 800 x 725mm	
SF-DESK11J	Half-Round Table 1200mm diameter	
SF-DESK11K	Half-Round Table 1600mm diameter	
With Chrome-alike Metalwork		
SF-DESK11A-C	Infotech Computer Workstation 900 x 600 x 725mm with Chrome-alike Metalwork	
SF-DESK11B-C	Infotech Computer Workstation 1200 x 600 x 725mm with Chrome-alike Metalwork	
SF-DESK11C-C	Infotech Computer Workstation 1500 x 600 x 725mm with Chrome-alike Metalwork	
SF-DESK11D-C	Infotech Computer Workstation 1800 x 600 x 725mm with Chrome-alike Metalwork	
SF-DESK11E-C	Infotech Computer Workstation 900 x 800 x 725mm with Chrome-alike Metalwork	
SF-DESK11F-C	Infotech Computer Workstation 1200 x 800 x 725mm with Chrome-alike Metalwork	
SF-DESK11G-C	Infotech Computer Workstation 1500 x 800 x 725mm with Chrome-alike Metalwork	
SF-DESK11H-C	Infotech Computer Workstation 1800 x 800 x 725mm with Chrome-alike Metalwork	
SF-DESK11J-C	Half-Round Table 1200mm diameter with Chrome-alike Metalwork	
SF-DESK11K-C	Half-Round Table 1600mm diameter with Chrome-alike Metalwork	



SF-DESK-MS1



SF-DESK-CPU1



SF-DESK-PB1



SF-DESK-MS2

Prices £*		*See Pricing Information on page 2
Optional Extras		
SF-DESK-CPU1	Adjustable CPU Tower Holder 380-525mm in height & 60-210mm in depth for SF-DESK11	
SF-DESK-MS1	Fixed Height Monitor Stand with universally joined VESA mounting bracket allowing the monitor to swivel in all directions. For use with SF-DESK11/12.	
SF-DESK-MS2	Height Adjustable Monitor Stand with knuckle jointed, dual beam arms with cable clamps, and swivel VESA mounting bracket. For use with SF-DESK11/12.	
SF-DESK-PB1	Computer Power Supply Block, fits inside cable trough, provides 4 individually fused 3.15A supplies and a separate earth. Conforms with BS 6396. For use with SF-DESK11/12.	

Cabinet Information



Lervad roller shutter cabinets are strongly constructed on a Baltic pine veneered carcass with a Koto veneer interior. For additional safety, the beech veneered roller shutter is designed to open downwards and has an integrated brake (see image top right). Simply unlock the shutter with the key and the shutter will open and roll up gently into the base.

Roller Shutter Cabinet with Shelves



SF-CB11A

SF-CB11B

SF-CB11C

Prices £*		*See Pricing Information on page 2
Roller Shutter Cabinets		
SF-CB11A	Lervad Roller Shutter Cabinet with 4 shelves (800 x 400 x 1800mm)	
SF-CB11B	Lervad Roller Shutter Cabinet with 4 shelves (1200 x 400 x 1800mm)	
SF-CB11C	Lervad Roller Shutter Cabinet with 4 shelves (1000 x 600 x 1800mm)	
Top Roller Shutter Cabinets		
SF-CB43A	Lervad Roller Shutter Top Cabinet with shelf (800 x 400 x 700mm)	
SF-CB43B	Lervad Roller Shutter Top Cabinet with shelf (1200 x 400 x 700mm)	
SF-CB43C	Lervad Roller Shutter Top Cabinet with shelf (1000 x 600 x 700mm)	

Lervad Tool Cabinet - Virgin Interior



SF-CB13A

SF-CB13B

Although there are numerous designs specifically created to store certain woodwork/metalwork tools, vices, clamps, etc. for teachers wanting to create their own interiors the cabinets are also available with 'virgin interiors' (ie., without drilling or slotting).

Prices £*		*See Pricing Information on page 2
SF-CB13A	Lervad Roller Shutter Cabinet with 'virgin interior' for workshop tools (800 x 400 x 1800mm)	
SF-CB13B	Lervad Roller Shutter Cabinet with 'virgin interior' for woodwork tools (1200 x 400 x 1800mm)	
SF-CB13C	Lervad Roller Shutter Cabinet with 'virgin interior' for woodwork and metalwork tools (1200 x 400 x 1800mm)	

Lervad Cabinet with Perfo / Louvre Interior



For those who require a flexible tool storage solution we are pleased to offer the (1200 x 400 x 1800mm) Lervad Roller Shutter Cabinet with a Perfo Panel interior. The Perfo panel accepts hook kits (see page 219).

The same Lervad cabinet is also available with a louvred back panel which holds storage bins.

Prices £*		*See Pricing Information on page 2
Perfo Panel Interior		
SF-CB24P	Lervad Roller Shutter Cabinet with a Perfo Back Panel (990 x 1371mm) for workshop tools	
SF-HOOKKIT-P5	20 piece hook kit for Perfo panel (for area 1sq m approx)	
See page 219 for information on Perfo Hook Kits.		
Louvre Panel Interior with 48 Bins		
SF-CB24B	Lervad Roller Shutter Cabinet with a Louvre Back Panel and: 24 bins (103 x 165 x 83mm) 24 bins (145 x 240 x 125mm)	

Lervad Tool Cabinet - Fitted Interior

These cabinets are supplied with fitted racks, pegs and slots to neatly house a complete set of workshop hand tools. Full tool sets are available but the systems used are common to most brands and suppliers. Listings of the tool-set contents can be supplied on request.



SF-CB14 / 14T



SF-CB15 / 15T



SF-CB16 / 16T



SF-CB23 / 23T

Prices £*		*See Pricing Information on page 2	
SF-CB14	Lervad Roller Shutter Cabinet with Fitted Interior for Workshop Tools (exc. tools) 800 x 400 x 1800mm		
SF-CB14T	Workshop Tools for SF-CB14		
SF-CB15	Lervad Roller Shutter Cabinet with Fitted Interior for Woodwork Tools (exc. tools) 1200 x 400 x 1800mm		
SF-CB15T	Woodwork Tools for SF-CUPBOARD15		
SF-CB16	Lervad Roller Shutter Cabinet with Fitted Interior for Metalwork Tools (exc. tools) 1200 x 400 x 1800mm		
SF-CB16T	Metalwork Tools for SF-CUPBOARD16		
SF-CB23	Lervad Roller Shutter Cabinet with Fitted Interior for Woodwork & Metalwork Tools (exc. tools) 1200 x 400 x 1800 mm		
SF-CB23T	Woodwork & Metalwork Tools for SF-CB23		

Lervad Tool Racks

These Tool Racks provide an alternative strategy for providing the hand tools that students need. Each rack is drilled, slotted and supplied with a full set of tools for an individual student. Alternatively racks can be supplied 'virgin' for drilling and slotting to accept alternative or existing resources. The locking cabinet ensures security and makes it straightforward to check-in and check-out tool sets as they are needed. A full list of tool-set contents can be supplied on request.



SF-TOOLRACK11
Woodwork Tool Rack



SF-TOOLRACK12
Metalwork Tool Rack



SF-TOOLRACK13
Wood & Metal Tool Rack

Prices £*		*See Pricing Information on page 2	
SF-CB44B	Lervad Roller Shutter Cabinet with 2 shelves (24 tool rack capacity) 1200 x 400 x 1800mm (exc. tool racks)		
SF-TOOLRACK10	Lervad Virgin Tool Rack (no tools, not drilled or slotted)		
SF-TOOLRACK11	Lervad Woodwork Tool Rack (inc. 15 tools)		
SF-TOOLRACK12	Lervad Metalwork Tool Rack (inc. 15 tools)		
SF-TOOLRACK13	Lervad Wood & Metal Tool Rack (inc. 15 tools)		

Lervad Cabinets for Vices and Clamps



An excellent aid to workshop tidiness and tool management, these roller shutter cabinets will securely house a selection of clamps, or the Lervad vices with vice holders needed to adapt woodwork benches for metalworking (see MTB-VICE17 pages 210-211.)

Prices £*		*See Pricing Information on page 2	
SF-CB45A	Lervad Roller Shutter Cabinet with Fitted Interior for 12 metalwork vices (exc. vices) 800 x 400 x 1800mm		
SF-CB45B	Lervad Roller Shutter Cabinet with Fitted Interior for 20 metalwork vices (exc. vices) 1200 x 400 x 1800mm		
SF-CB46A	Lervad Roller Shutter Cabinet with Fitted Interior for clamps (exc. clamps) 800 x 400 x 1800mm		

Steel Cupboards



Our range of industrial-quality steel cupboards are built to withstand punishing use, but remain secure and attractive for the workshop or storeroom.

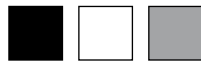
Shelf loading 85kg UDL.

Door and Drawer Colours



Smoke White Silver Blue Red Yellow Green

Body Colours



Black Smoke White Silver

Please state the colours you require when ordering.

Prices £*		*See Pricing Information on page 2	
Large Cupboards 915(W) x 460(D) x 1780(H)mm			
SF-CB50	Standard Steel Cupboard (3 adj. shelves)		
SF-CB54	Steel Wardrobe Cupboard (1 shelf and hanging rail)		
SF-CB51	Steel Cupboard/Wardrobe (3 adj. shelves & shelf with hanging rail)		
SF-CB52	8 Compartment Steel Cupboard (6 adj. shelves)		
SF-CB53	12 Compartment Steel Cupboard (9 adj. shelves)		
SF-CB56	Hanging File Steel Cupboard (5 adj. lateral rails, tiles not included)		
SF-CB55	Steel Open Cupboard (4 adj. shelves)		
Slim Cupboards 610(W) x 460(D) x 1780(H)mm			
SF-CB60	Slim Steel Cupboard (3 adj. shelves)		
SF-CB61	Slim Steel Wardrobe (1 shelf and hanging rail)		
Medium Cupboards 915(W) x 460(D) x 1015(H)mm			
SF-CB70	Steel Low Cupboard (1 adj. shelf)		
Small Cupboards 460(W) x 460(D) x 890(H)mm			
SF-CB71	Small Steel Cupboard (2 adj. shelves)		
SF-CB72	Small Steel Tool Cupboard (2 adj. shelves)		
Workstation Cupboards 915(W) x 460(D) x 1060-1210(H)mm			
SF-CB80	Steel Workstation (2 adj. shelves & 2 lockable drawers)		
SF-CB81	Steel Workstation (2 adj. shelves & 1 fixed shelf)		
SF-CB82	Open Steel Workstation (2 adj. shelves & 1 fixed shelf)		
SF-CB83	Open Steel Workstation (2 adj. shelves & 2 lockable drawers)		
Optional Extras for Steel Cupboards			
SF-CBA-PADF1	Additional Padlock Fitment for double door cupboards (must be fitted at time of purchase)		
SF-CBA-SHELF1P	Additional Shelf with Clips (900 x 460mm) for SF-CB50/54/55/70 (Includes 4 clips)		
SF-CBA-SHELF2P	Additional Shelf with Clips (610 x 460mm) for SF-CB60/61 (Includes 4 clips)		
SF-CBA-SHELF3P	Additional Shelf with Clips (460 x 460mm) for SF-CB71/72 (Includes 4 clips)		
SF-CBA-SHELF4P	Additional Shelf with Clips (305 x 460mm) for Steel Cupboards (Includes 4 clips)		

TechSoft Hazardous Storage Cupboards



Dished Top available for Small Hazardous Cupboard (includes rubber mat)

These cupboards isolate flammable materials and vapours from potential sources of ignition and clearly identify hazardous products in case of a fire. All have a removable 75mm sump base tray and are supplied with adjustable 85kg shelves, and a fitted smoke & fire alarm.

Prices £*		*See Pricing Information on page 2	
SF-CB90	Standard Hazardous Cupboard (3 adj. shelves) 915(W) x 460(D) x 1780(H)mm		
SF-CB91	8 Compartment Hazardous Cupboard (6 adj. shelves) 915(W) x 460(D) x 1780(H)mm		
SF-CB92	Low Hazardous Cupboard (1 adj. shelf) 915(W) x 460(D) x 1015(H)mm		
SF-CB93	Small Hazardous Cupboard (2 adj. shelves) 460(W) x 460(D) x 890(H)mm		
SF-CB94	Small Hazardous Cupboard with dished top and rubber mat (2 adj. shelves) 460(W) x 460(D) x 890(H)mm		
Optional Extras for Hazardous Cupboards			
SF-CBA-PADF1	Padlock Fitment (must be fitted at time of purchase)		
SF-CBA-SHELF90P	Additional Shelf (900 x 460mm) for SF-CB90/92 (Includes 4 clips)		
SF-CBA-SHELF91P	Additional Shelf (460 x 460mm) for SF-CB91/93/94 (Includes 4 clips)		

Bott Standard Duty Cupboard with Bins



Robust sheet steel construction with a flexible interior supplied with bins. The double hinged doors are lockable.

Prices £*		*See Pricing Information on page 2	
SF-CB107A	Bott Verso Bin Cupboard, 800 x 350 x 1000mm with 20 No. 3 bins (148 x 240 x 128mm) and 4 shelves		
SF-CB107B	Bott Verso Bin Cupboard, 1050 x 350 x 1000mm with 30 No. 3 bins (148 x 240 x 128mm) and 4 shelves		
SF-CB107C	Bott Verso Bin Cupboard, 800 x 350 x 2000mm with 44 No. 3 bins (148 x 240 x 128mm) and 10 shelves		
SF-CB107D	Bott Verso Bin Cupboard, 1050 x 350 x 2000mm with 66 No. 3 bins (148 x 240 x 128mm) and 10 shelves		

Steel Storage Cupboards and Storage Shelving

Bott Wall Cupboard



These wall cupboards are constructed of galvanised steel and come with 2 shelves which are adjustable on a 25mm pitch (Maximum loading 60kg per shelf).

Prices £*		*See Pricing Information on page 2
SF-CB108A	Bott Wall Cupboard 525 x 350 x 800mm	
SF-CB108B	Bott Wall Cupboard 800 x 350 x 800mm	
SF-CB108C	Bott Wall Cupboard 1050 x 350 x 800mm	

Bott Tool Cupboard with Perfo Interior



This cupboard is constructed of galvanised steel and comes with a perfo interior which can be fitted out with hook kits to hold tools etc.

Prices £*		*See Pricing Information on page 2
SF-CB135-PP3	Bott Tool Cupboard with Perfo Interior 1050(W) x 650(D) x 2000(H)mm	
Perfo Hook Kits <i>N.B. Hooks supplied hold one tool each. Contact TechSoft for details of hooks/racks which will accommodate multiple tools.</i>		
SF-HOOKKIT-P4	15 piece hook kit for Perfo Panel	
SF-HOOKKIT-P5	20 piece hook kit for Perfo Panel	
SF-HOOKKIT-P8	30 piece hook kit for Perfo Panel	
SF-HOOKKIT-P9	40 piece hook kit for Perfo Panel	
SF-HOOKKIT-P10	60 piece hook kit for Perfo Panel	
SF-HOOKKIT-P11	80 piece hook kit for Perfo Panel	

Bott Tool Cupboard with Combination Interior



This cupboard is constructed of galvanised steel and comes with a perfo/louvre back panel which can be fitted out with tool hooks and bins. There are also 3 drawers (75mm, 125mm and 175mm) and a shelf.

Prices £*		*See Pricing Information on page 2
SF-CB108D	Bott Verso Kitted Cupboard with Combination Interior 1050(W) x 550(D) x 2000(H)mm	
SF-HOOKKIT-P2	5 single hooks, 5 double hooks, 1 spanner holder for Perfo Panel	
SF-PBIN-M1	Pack of 32 No. 2 Plastic Bin, 103 x 165 x 83mm. Mixed colours	

Heavy Duty Shelving



SF-RACKSTOR13A + SF-RACKSTOR13A-S

Each shelving unit features a strong galvanised steel frame and five melamine-faced shelves each capable of supporting 340kg of uniformly distributed load. This is class leading performance for demanding users. Available in two depths and two widths, these units will fit together to form a bespoke storage system. The units feature boltless assembly and are supplied complete with protective feet, mallet and safety weight loading labels.

Prices £*		*See Pricing Information on page 2
SF-RACKSTOR13A	Shelving Unit with 5 melamine shelves, 915 x 455 x 1980mm	
SF-RACKSTOR13B	Shelving Unit with 5 melamine shelves, 915 x 610 x 1980mm	
SF-RACKSTOR13C	Shelving Unit with 5 melamine shelves, 1220 x 455 x 1980mm	
SF-RACKSTOR13A-S	Additional Shelf for SF-RACKSTOR13A	
SF-RACKSTOR13B-S	Additional Shelf for SF-RACKSTOR13B	
SF-RACKSTOR13C-S	Additional Shelf for SF-RACKSTOR13C	

Sheet Material Storage Racks

Nortek Racking

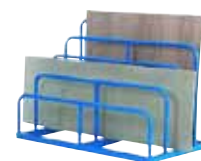


SF-RACKSHEETMAT1

Industrial Racking



SF-RACKSHEETMAT7



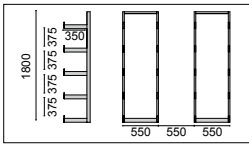
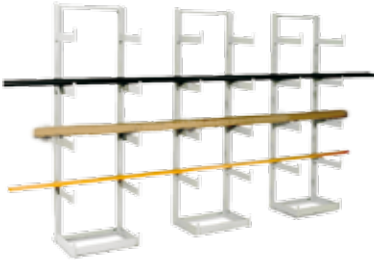
SF-RACKSHEETMAT6

Sheet material racks featuring steel construction and offering a space-saving, stable storage solution. Select the appropriate size for storing full sheets, prepared boards or mixed sizes. We recommend that racks are floor fixed for safety reasons.

Prices £*		*See Pricing Information on page 2
SF-RACKSHEETMAT1	Sheet Material Storage Rack 5 storage sections, 300mm apart, overall dimensions 1680(W)x750(D)x1000(H)mm	
SF-RACKSHEETMAT7	Sheet Material Vertical Storage Rack 3 storage sections 300mm apart, overall dimensions 1083(W)x1022(D)x1220(H)mm. Holds boards up to 2.4m high and 1.2m wide. Can be bolted to floor for extra stability.	
SF-RACKSHEETMAT6	Sheet Material Variable Height Vertical Storage Rack 4 storage sections 160mm apart, 5 support bars: 400, 550, 700, 850 & 1000mm high, overall dimensions 1400(W)x800(D)x1000(H)mm. 100kgs UDL between bars, 400kgs max UDL per rack. Basic floor fixings supplied.	

Horizontal Storage Racking

Nortek Racking



This horizontal storage rack offers an alternative method of storing long materials. The racking is made up of fully welded heavy duty steel frameworks which have five pairs of 350mm long cantilever support arms (including the base arms) in the height. Each bay is spaced out so that the arms are equally spaced out. This racking requires both wall and floor fixing.

Prices £*

*See Pricing Information on page 2

SF-RACKHORZ1	Horizontal Storage Rack Bay (per bay)	
---------------------	---------------------------------------	--

Industrial Racking



Single Side
(SF-RACKHORZ6P-500 + SF-RACKHORZ6EP-500)



Double Sided

A robust modular system for storing timber and metal stock featuring heavy-duty steel construction. Free-standing units are stable and fully load-bearing. Floor or wall-fixing can be used to ensure stability. Extension bays can be added. Double sided units make particularly good use of space and are often an ideal solution for storing longer lengths.

Prices £*

*See Pricing Information on page 2

Single Sided Cantilever Racking

(arms adjustable, 1000mm column centres, 2500mm height)

SF-RACKHORZ6P-400	Single Sided Racking 6 arms each 400mm length, 184kg capacity.	
SF-RACKHORZ6EP-400	Single Sided Racking Extension 3 arms each 400mm length, 184kg capacity.	
SF-RACKHORZ6P-500	Single Sided Racking 6 arms each 500mm length, 149kg capacity.	
SF-RACKHORZ6EP-500	Single Sided Racking Extension 3 arms each 500mm length, 149kg capacity	

Double Sided Cantilever Racking

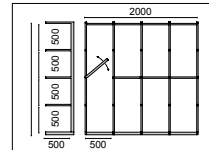
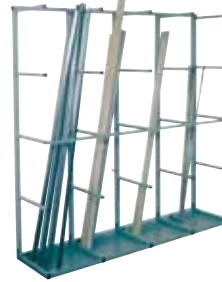
(arms adjustable, 1000mm column centres, 2500mm height)

SF-RACKHORZ7P-400	Double Sided Racking 12 arms each 400mm length, 184kg capacity	
SF-RACKHORZ7EP-400	Double Sided Racking Extension 6 arms each 400mm length, 184kg capacity	
SF-RACKHORZ7P-500	Double Sided Racking 12 arms each 500mm length, 149kg capacity	
SF-RACKHORZ7EP-500	Double Sided Racking Extension 6 arms each 500mm length, 149kg capacity	

N.B. All the above are also available with 1500mm column centres at an additional cost of per unit

Vertical Storage Racking

Nortek Racking



This two metre high vertical storage rack is made up of four 500mm wide bays. Each bay has a 500mm square sheet steel base tray and a welded tubular steel upright frame. The mid-way arms are provided with a material retaining drop latch rail. The rack can be extended in length by fitting additional add-on bays.

N.B. This rack is not designed to be free-standing and for safety reasons requires fixing both to the floor and to the wall.

Prices £*

*See Pricing Information on page 2

SF-RACKVERT1	Vertical Storage Rack (2000 x 500 x 2000mm, Four 500mm wide bays)	
SF-RACKVERT1A	Extension Bay for SF-RACKVERT1	

Industrial Racking



SF-RACKVERT2

SF-RACKVERT3

These industrial-quality vertical racks feature robust steel construction and are supplied flat-packed for easy bolt-together assembly. Extension bays can be added for a bespoke storage solution. The upper bay sections have additional dividers to help segregate longer lengths of different section materials. These can be used as free-standing units but bolting to the floor is recommended for extra stability. Select the appropriate units for neatly and safely storing material from 2.5 to 4m long. Vertical racking offers a distinct advantage for saving precious floor space.

Prices £*

*See Pricing Information on page 2

SF-RACKVERT2	Vertical Storage Rack (1350 x 550 x 1500mm, includes 3 adjustable dividers and floor fixings)	
SF-RACKVERT2A	Extension Rack of SF-RACKVERT2 (1300 x 550 x 1500mm)	
SF-RACKVERT2B	Extra Divider for SF-RACKVERT2	
SF-RACKVERT3	Vertical Storage Rack (1350 x 550 x 2700mm, includes 3 adjustable dividers and floor fixings)	
SF-RACKVERT3A	Extension Rack for SF-RACKVERT2 (1300 x 550 x 2700mm)	
SF-RACKVERT3B	Extra Bottom Divider for SF-RACKVERT3	
SF-RACKVERT3C	Extra Top Divider for SF-RACKVERT3	

TECHSOFT ENTERPRISE

Student Business Enterprise Projects

Signage and Display

School Promotion

School and Team Identity

Curriculum Resources for Art, Media and Design Technology



Student Enterprise, Media and Reprographics options from TechSoft are built around class-leading equipment and exemplary levels of support. Established in 1987, TechSoft UK Ltd has grown to be the leading supplier of Computer-Aided-Design and Manufacturing systems for education. Enabling customers to get the best from their investment is at the heart of everything we do.

All our Enterprise Packs have been carefully selected to deliver high added-value for student business and enterprise projects. With simple production processes, they offer significant return-on-investment potential and the chance to maximise profits from creative ideas. In addition, the resources provide a cost-effective solution for in-house signage, promotion and display.



Sublimation

Embroidery

Laser Cutting

Knife Cutting

Large Format Banner +
Display Printer

ENTERPRISE OPPORTUNITIES

Six packages are available which provide the following:

- Sublimation mugs, clothing and iPhone cases
- Self-adhesive vinyl signage for walls, floors and windows
- Applied-vinyl sports shirts
- Embroidered teamware
- Peelable wall graphics
- Laser engraved signage
- Laser engraved trophies
- Banners and pop-ups
- Event promotion: T-shirts, posters and banners.
- Banners as scene backdrops for drama productions
- Themed banners, posters and merchandising goods for sale and display



Enterprise Packs

Sublimation Enterprise Packs

Transfer Brilliant, Full Colour Graphics onto Mugs and other Sublimation Friendly Items

Sublimation Printing will reproduce brilliant, full colour graphics onto a huge range of ready-made sublimation friendly products. The results are eye-catching, durable and totally professional. Production is simple and inexpensive making Sublimation technology a quick means to turn creative ideas into profitable business reality. Our Sublimation Packs are also available with a robust wheeled workstation with storage for accessories, materials and consumables to provide a complete plug-and-play business solution.

Items you can make 



School Promotion



Event Promotion

Why Invest?

- Low start-up costs and masses of ready-to-customise products – a ready-made business model.
- Excellent profit potential and a valuable resource for the Design Technology and Art curriculum.
- A great teamwork activity with opportunities to plan and measure production efficiencies.
- Production skills are reliable and learned quickly.

Potential Earnings / Savings

Customised Item	Materials Cost	Resale	Profit
Printed Mug			
Printed T - Shirt (A5 design)			
Printed Polo Shirt (A5 design)			
Printed iPhone 5/5S Case			

Enterprise Sublimation Pack 1 (A4)

Includes:

- Full Sublimation Starter Pack including printer (A4), sublimation cartridges, heat press, mug press, 200 sheets sublimation paper (A4), heat resistant tape (MP11-SUB-A4F)



- 36 x Sublimation-ready ceramic mugs (SUB-MUGP-36)
- 2 x Sublimation-ready white T-shirts (SUB-TS1-2-WH)
- 2 x Sublimation-ready white Polo shirts (SUB-PS1-2-WH)
- 2 x Leather case for iPhone 5/5S (SUB-PHONE1-2)

Optional Extras:

- Mobile Workstation TF-WS3-C2 - see page 206 for more information

For full details of our sublimation systems see pages 120 to 121.

£

Order Code: BE-SUB-PK1

Enterprise Sublimation Pack 2 (A3)

Includes:

- Full Sublimation Starter Pack including printer (A3), sublimation cartridges, heat press, mug press, 200 sheets sublimation paper (A3), heat resistant tape (MP11-SUB-A3F)



- 36 x Sublimation-ready ceramic mugs (SUB-MUGP-36)
- 2 x Sublimation-ready white T-shirts (SUB-TS1-2-WH)
- 2 x Sublimation-ready white Polo shirts (SUB-PS1-2-WH)
- 2 x Leather case for iPhone 5/5S (SUB-PHONE1-2)

Optional Extras:

- Mobile Workstation TF-WS3-C2 - see page 206 for more information

For full details of our sublimation systems see pages 120 to 121.

£

Order Code: BE-SUB-PK2

Versatile and Popular Cutting Machine for Vinyl, Card, etc.

Roland Knife Cutters provide industry-leading technology and a proven track record of accuracy, performance and reliability. They precisely cut a large range of applied films for different applications. These range from self-adhesive vinyl for signage and heat-applied vinyl for garments to ceramic film for firing onto glazed mugs, plates, etc. Knife-cutting provides an economical, professional means to produce signage and customised products. Our Knife Cutter Packs provide everything you need to get started. A smart, robust mobile workstation for safe and secure storage of materials and the host PC is also available.

Roland
Items you can make



Heat Applied Vinyl Crest



Heat Applied Vinyl Graphics



Vinyl Signage



Vinyl Name Tag



Peelable Vinyl Wall Graphics



Ceramic Transfers *(requires kiln)*

Enterprise Knife Cutting Pack 1

Includes:

- Roland Stika SV-8E (MP-STIKA-SV8E)



- Comprehensive Training Pack
- Heat Press (SLM-SWINGPR3830 + SLM-SPCAP1)
- Mixed pack of coloured vinyl and application film (TAVN2-P1)
- 10m Roll Blue Removable Vinyl (TAVR12-10-BL)
- Mixed pack of 13 heat-applied vinyl sheets (TAVI-P2)
- Tweezers and squeegee (TA-TWEEZERS + TAVA-SQ5)
- T Shirt, Polo Shirt and Hoodie (CL-TS1-2 + CL-PS1-2 + CL-HD1-2)

Optional Extras:

- Mobile Workstation TF-WS3-C2 - see page 205 for more information

For full details of our knife cutting systems see pages 32 to 39

£
Order Code: BE-KC-PK1

Why Invest?

- Low start-up costs and low input costs but delivering professional results.
- An ideal in-house resource to provide cost-effective signage around the school.
- Versatile product options from wall graphics to custom graphics for work and sportswear.
- An ideal resource to introduce Design students to real CAD/CAM activity.

Enterprise Knife Cutting Pack 2

Includes:

- Roland CAMM 1 GS-24E (MP-CAMM1-GS24E)



- Comprehensive Training Pack
- Heat Press (SLM-SWINGPR3830 + SLM-SPCAP1)
- Mixed pack of coloured vinyl and application film (TAVN5-P1)
- 10m Roll Blue Removable Vinyl (TAVR15-10-BL)
- Mixed pack of 13 heat-applied vinyl sheets (TAVJ-P2)
- Tweezers and squeegee (TA-TWEEZERS + TAVA-SQ5)
- T Shirt, Polo Shirt and Hoodie (CL-TS1-2 + CL-PS1-2 + CL-HD1-2)

Optional Extras:

- Stand RL-STAND2 - see page 37 for more information
- Mobile Workstation TF-WS3-C2 - see page 205 for more information

For full details of our knife cutting systems see pages 32 to 39

£
Order Code: BE-KC-PK2

Potential Earnings / Savings

Customised Item	Materials Cost	Resale	Profit
Personalised T-Shirt <i>(Logo 90 x 90mm)</i>			
Personalised Polo Shirt <i>(Logo 90 x 90mm)</i>			
Personalised Hoodie <i>(Logo 90 x 90mm)</i>			
In-House Signage	Materials Cost	Outsourced	Saving
Vinyl Wall Lettering <i>(1000 x 100mm)</i>			
Peelable Wall Graphics <i>(500 x 500mm)</i>			

Enterprise Packs

Computerised Embroidery Enterprise Packs

Low Cost, User Friendly, Computerised Embroidery Systems

Based around the compact Brother PR-670E multi-needle machine to offer rapid output and large-scale embroidery onto almost any material. Multi-needles and advanced features minimise set-up time so commercial scale production can start almost immediately. Our Embroidery pack contains everything you need to get started. A smart, robust mobile workstation for safe and secure storage of materials and the host PC is also available.

brother.
Items you can make



Cap Embroidery



Sleeve Embroidery



Sweat Shirt Embroidery



Polo Shirt Embroidery

Computerised Embroidery Pack 1

Includes:

- Brother PR-670E multi-needle computerised embroidery machine (TM-EMB-PR670WCAPYL)



- Cap Frame
- Sleeve Frame
- PE Design 10 Software (TM-EMB-PEDES10)
- Starter Set of Threads, Stabiliser & Interfacing (TA-EMB-SST10)
- T Shirt, Polo Shirt, Sweat Shirt & Cap (CL-TS1-2 + CL-PS1-2 + CL-SS2-2 + LITC-CAP)

Optional Extras:

- Brother Stand TMP-EMB-PRSTAND - see page 104 for more information
- Mobile Workstation TF-WS3-C2 - see page 206 for more information

For full details of our embroidery systems see pages 104 to 105

£

Order Code: BE-EMB-PK1

Why Invest?

- Computerised embroidery delivers professional results simply and quickly.
- Offers realistic business opportunities and provides a creative tool for unique textile products.
- Students can transform 'basic' garments into desirable, high value, products.
- Impressive results will motivate students and raise achievement in all creative areas of the curriculum.


Potential Earnings / Savings

Customised Item	Materials Cost	Resale	Profit
Embroidered T-Shirt <i>(Logo 90 x 90mm)</i>			
Embroidered Polo Shirt <i>(Logo 90 x 90mm)</i>			
Embroidered Sweat Shirt <i>(Logo 90 x 90mm)</i>			
Embroidered Cap <i>(Logo 55 x 55mm)</i>			

Computerised Embroidery Pack 2

Includes:

- Brother Innov-is V3 multi-needle computerised embroidery machine (TM-EMB-INNOV3)



- PE Design 10 Software (TM-EMB-PEDES10)
- Starter Set of Threads, Stabiliser & Interfacing (TA-EMB-SST8)
- T Shirt, Polo Shirt, Sweat Shirt & Cap (CL-TS1-2 + CL-PS1-2 + CL-SS2-2)

Optional Extras:

- Mobile Workstation TF-WS3-C2 - see page 206 for more information

For full details of our embroidery systems see pages 106 to 107

£

Order Code: BE-EMB-PK2

High Specification Laser Cutters and Engravers

TechSoft LaserCAM machines have a proven track record of high performance and reliable service in schools and colleges throughout the UK. Not to be confused with low-budget machines, LaserCAM features premium quality components, superb build quality and US-built sealed CO₂ laser tubes. Machines are supplied with everything you need to get started including a state-of-the-art extraction system. Laser cutting and engraving is rapid, very simple to use and gives the most direct route possible from student's creative work to the finished article.

Items you can make



Acrylic Coasters



Laser-Ply Trinket Box
*with kind permission from Mike Wilson
(www.dragonpowered.co.uk).*



Engraving Laminate



Cut & Engraved Acrylic



Metallic Engraving Laminate



Enterprise LaserCAM Pack A2+

Includes:

- TechSoft LaserCAM A2+ Package including high Specification Extraction and Filtration System (MP-LCA2P-30NR)



- Rotary Table (TMA-LC-R)
- Mixed Materials Pack (TPM5-LC2)
Contains 3 sheets laser engraving laminate (2 standard, 1 metallic); 11 sheets polypropylene; 5 sheets 4mm laser grade ply; 5 sheets 4mm medite; 17 sheets 3mm acrylic (9 colour, 1 clear, 7 transparent); 10 sheets 5mm acrylic (9 colour, 1 clear); 8 sheets 4mm plastazote; 2 sheets 12mm plastazote. All sheets 600 x 400mm. Mixed colours

For full details of our LaserCAM systems see pages 23 to 25

£

Order Code: BE-LASER-PK2

Why Invest?

- Laser-cut products have a huge and growing market with lots of business opportunities.
- Laser precision allows students to achieve professional standards with relative ease.
- Use 'standard' materials to save input costs while making desirable high-value products.
- Highly motivating technique for students to demonstrate CAD/CAM skills for exam assessment.

Potential Earnings / Savings

Customised Item	Materials Cost	Resale	Profit
Laser-Ply Trinket Box <i>(130 x 130 x 80mm)</i>			
Acrylic Photo Frame <i>(275 x 125 x 3mm coloured acrylic)</i>			
Engraved Laminate Keyring <i>(100 x 30mm coloured engraving laminate)</i>			
In-House Signage	Materials Cost	Outsourced	Saving
Coloured Laminate Sign <i>(600 x 130 x 1.3mm)</i>			
Metallic Laminate Sign <i>(600 x 130 x 1.3mm)</i>			
Engraved Clear Acrylic Sign <i>(600 x 130 x 1.5mm)</i>			
Acrylic Trophy <i>(150 x 100 x 10mm clear acrylic)</i>			

Enterprise LaserCAM Pack A3+

Includes:

- TechSoft LaserCAM A3+ Package including high Specification Extraction and Filtration System (MP-LCA3P-30NR)



- Rotary Table (TMA-LC-R)
- Mixed Materials Pack (TPM5-LC3)
Includes 3 sheets laser engraving laminate (2 standard, 1 metallic); 11 sheets polypropylene; 5 sheets laser grade ply; 5 sheets 4mm medite; 17 sheets 3mm acrylic (9 colour, 1 clear, 7 transparent); 10 sheets 5mm acrylic (9 colour, 1 clear), 8 sheets 4mm plastazote; 2 sheets 12mm plastazote. All sheets 410 x 280mm (400 x 280mm for engraving laminate). Mixed colours.

For full details of our LaserCAM systems see pages 23 to 25

£

Order Code: BE-LASER-PK3

Enterprise Packs

TrueVIS Enterprise Packs

Printing & Cutting, All in One Machine

TrueVIS from Roland DG is a high quality large format printer with CNC Knife Cutting built in. The TrueVIS range can be used to print outstanding quality banners and posters, as well as being able to cut vinyl stencil and applied graphics. The two functions can be combined to produce bespoke wall graphics, decals, self-adhesive logos, badges, fabric transfers and signage. TrueVIS uses durable, solvent based inks for bright images that will resist weathering and wear and tear. The pack includes the TrueVIS SG-300 with 762mm width capacity. A larger model, the SG-540 with 1,371mm width capacity is also available.

Items you can make





Roll-Up Banners



Canvas Print



Iron-on Printable Vinyl



Peelable Vinyl Wall Graphics



Vinyl Signage



Outdoor Banners



Self Adhesive Vinyl Posters

Why Invest?

- Students produce prestige products that have a ready market
- Produce bespoke, professional signage for all your school events
- Save money and raise the standard of in-house displays and school promotion
- Immerse students in a real business opportunity with benefits all round

Potential Earnings / Savings

Customised Item	Materials Cost	Resale	Profit
T-Shirt (Printed Logo 90 x 90mm)			
Polo Shirt (Printed Logo 90 x 90mm)			
Canvas Print (A4+) in Card Frame			
In-House Signage	Materials Cost	Outsourced	Saving
A3 Self-Adhesive Poster			
Peelable Wall Graphics (650 x 650mm)			
Roll-up Banner Material (600mm x 1.86m)			
Outdoor Banner (3m x 760mm)			

Enterprise Print and Cut Pack 1

Includes:

- Roland TrueVIS SG-300 with ink cartridges and stand (MP2-TV-SG300)



- Mixed Materials Pack for Print and Cut (TPM-SP300)
- Banner Material (TAV-B7-10)
- Banner Eyelet Press with 100 brass eyelets and banner tape (TAV-EP1+TAV-EY100+TAV-BT3)
- Roll-up Banner Stand (TAV-BS-P60)
- Roll-up Banner Material (TAV-BS7S-10)
- Mixed Pack of Coloured Vinyl and Application Film (TAVN5-P1)
- Mixed pack of 13 heat-applied vinyl sheets (TAVJ-P2)
- Tweezers and squeegee (TA-TWEEZERS + TAVA-SQ5)
- T-Shirt and Polo Shirt (CL-TS1-2 + CL-PS1-2)

For full details of our TrueVIS systems see pages 38 to 39.

£

Order Code: BE-TV-PK1

Enterprise Print and Cut Pack 2

Includes:

- Roland TrueVIS SG-540 with ink cartridges and stand (MP2-TV-SG540)



- Mixed Materials Pack for Print and Cut (TPM-SP540)
- Banner Material (TAV-B13-10)
- Banner Eyelet Press with 100 brass eyelets and banner tape (TAV-EP1+TAV-EY100+TAV-BT3)
- Roll-up Banner Stand (TAV-BS-P88)
- Roll-up Banner Material (TAV-BS9S-10)
- Mixed Pack of Coloured Vinyl and Application Film (TAVN5-P1)
- Mixed pack of 13 heat-applied vinyl sheets (TAVJ-P2)
- Tweezers and squeegee (TA-TWEEZERS + TAVA-SQ5)
- T-Shirt and Polo Shirt (CL-TS1-2 + CL-PS1-2)

For full details of our TrueVIS systems see pages 38 to 39.

£

Order Code: BE-TV-PK2

Focus Educational Software Resources

These interactive Design Technology resources are suitable for whole class teaching or individual study. They are tried and tested, having been developed over 15 years by experienced UK teachers. Available as Windows PC software (choose between single or site licences), or online with an annual subscription (DT Apps Pack). Site licences cover unlimited users within a school. The online annual subscription (DT Apps Pack) covers all of the titles and also includes home use at no extra cost.

Metals Manufacturing Processes

This resource covers the main techniques involved in manufacturing metal based products, bringing examples of industrial processes into the classroom. Each topic contains an animation of the process, detailed information, video clips and photos which can be printed out or pasted into other applications. There are built-in tests enabling students to quickly access their understanding of a topic area.



Processes include: Sand casting, Die Casting, Investment Casting, Sheet Metal Bending, Punching, Presswork, Drilling Jigs, Spinning, Welding, CNC Machining, Plasma Cutting.

OS100U	Metals Manufacturing Processes Windows Single User Licence.	
OS100S	Metals Manufacturing Processes Windows Site Licence	

Plastics Manufacturing Processes

Based on real-life production facilities, this resource successfully brings industry into the classroom. Each topic has an animation of the process and a wealth of detailed information and photographs. Once a topic has been studied, an on-screen test allows students to assess their knowledge and understanding. A great way to teach the theory of manufacturing in plastics.



Featured Processes include: Blow Moulding, Calendering, Compression Moulding, Injection Moulding, Extrusion, Line Bending, Rotational Moulding, Vacuum Forming.

OS101U	Plastics Manufacturing Windows Single User Licence.	
OS101S	Plastics Manufacturing Windows Site Licence	

Wood Joints

Exceptionally clear 3D models of 37 traditional joints, linked information pages and 80+ photos make this the ideal resource for students learning about joints and where they should be used in project work. Images and photos can be pasted into design folders with guidance given as to how the information should be evaluated.



Topic Areas Covered Include: Chairs, Tables, Cabinets, Table Tops, Drawers and Boxes, Doors and Panels. Joint Features Include: Dowel, Bridle, Mitre, Halving, Mortise & Tenon, Housing, Dovetail, Butt, Edge-to-Edge, etc.

OS102U	Wood Joints Windows Single User Licence.	
OS102S	Wood Joints Windows Site Licence	

Resistant Materials 2 Database

This resource includes information and prices for the majority of materials, components and fittings found in Resistant Materials design projects. Students can Browse, Search and Evaluate materials and produce accurate Cutting Lists and Project Costings. Findings can be saved and printed out for direct inclusion into design folders. New materials and price updates can all be added by the teacher.



Database categories include: Metals/Plastics/Wood, Man-made boards; Catches, Locks & Stays, Electronic Components, Handles & Knobs, Hinges, Hooks & Eyes, Knock-down Fittings, Nails, Rivets, Screws, Nuts, Bolts & Washers.

OS103U	Resistant Materials 2 Windows Single User Licence.	
OS103S	Resistant Materials 2 Windows Site Licence	

Mechanisms

This resource covers all major types of mechanisms and their practical application. Each mechanism is clearly explained through 3D animations, photographs, video and text. When used as a self-study package for learning the theory of mechanisms, students can work at their own pace, checking progress as they go through on-screen tests.

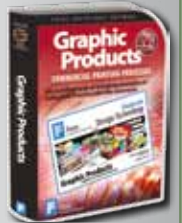


Topics include: Motion, Gear Systems, Pulley Systems, Lifting Systems, Screw Threads, Levers, Linkages, Cams & followers, Crank & slider, Sprockets & chain, Ratchet & Pawl, Moments Equilibrium, Shafts & Couplings, Bearings & Lubrication, Clutches & Brakes.

OS104U	Mechanisms Windows Single User Licence.	
OS104S	Mechanisms Windows Site Licence	

Graphic Products

By bringing examples of industrial practice into the classroom, this innovative and unique resource shows how the company designs, prints, packages and advertises one of its products using three industry standard printing processes – offset lithography, screen printing and flexography.



Topics include: Brochure Artwork, Imposition & Colour Separation, Plate Setting & Processing, 4 Colour Printing Process, Folding, Stitching, Trimming, Screen Production, Packaging, Cost of Production, etc.

OS105U	Graphic Products Windows Single User Licence.	
OS105S	Graphic Products Windows Site Licence	

Fairground Rides

An exciting interactive resource designed to aid the teaching of Fairground Ride control projects. High quality 3D animations of 18 amusement park rides are available in addition to photographic images, written descriptions and videos. At the click of a button the internal mechanism of each ride can be revealed. The resource is structured to encourage students of all abilities to conduct research into the design of ride layouts, mechanisms and electric circuits.



Topic Areas Covered: 3D Amusement Park Ride Simulations, Pulley Systems, Types of Motion, Gear Systems, Switching Circuits, Technical Vocabulary, On-Screen Testing.

OS106U	Fairground Rides Windows Single User Licence.	
OS106S	Fairground Rides Windows Site Licence	

Mechanical Toys

This resource is designed to aid the teaching of Moving Toy and Automata projects and is great fun to use! It is structured to encourage students of all abilities to conduct their own investigations into the basic principles of mechanisms. It combines seven topic areas with detailed analyses of 21 real-life automata.



Topic Areas Covered Include: Types of Motion, Gear Systems, Levers, Linkages, Pulley Systems, Cams and Followers, Technical Vocabulary.

OS107U	Mechanical Toys Windows Single User Licence.	
OS107S	Mechanical Toys Windows Site Licence	

**DT Apps Pack
OS120S1**

The Focus DT Apps Pack Cloud Subscription gives unlimited online access to all of the above titles both at school and at home for all teachers and students. No installation required. iPad, Android, PC & MAC compatible (internet connection required). New titles and updates included at no extra cost. (For login information please include the email address of the Head of DT and/or Network Manager with your order.)

**£
per year
subs**

Teaching Resources

Education Training Packs

What is in our Training Packs?

At TechSoft, our approach to new machines is always the same. First we read all the manuals and guides to find out exactly how to set-up the machine. Sometimes we talk to the manufacturer and ask them to change things to make it safer, or more reliable, for schools to use. We then find ways to make it even simpler to operate, and we write extensions and extra features into our software to make output as easy and logical as it can be. We know that teachers have more than enough to contend with so, wherever possible, we make sure that everything works in the same way as other TechSoft machines.

Once we are happy with the machine and software side of things we find ways to make it as easy as possible to set and change cutters, or load materials for print alignment, for example. We design special collets and tooling and have these manufactured. Next, we rack our brains to come up with interesting projects you could use the machine for in school. We source new materials and test these to make sure they give interesting and reliable results. When we're certain that the machine is as good as it can be, and that the projects work perfectly every time, we burn all the projects onto a CD, collect samples of all the materials and we put them in a box. We add all the special tools and accessories we have designed, and then we write a simple, jargon-free book that distils everything we have done into a straightforward series of Tutorials.

We call this a Training Pack and teachers tell us it is the quickest and most helpful way possible to really get to know a machine, and to generate an inspiring set of sample projects - which is exactly why we write them.

How do I get hold of a Training Pack?

Training Packs are supplied free with all our most popular CNC machines and replacements can be purchased if needed. We also supply Materials Only Packs - these contain enough materials for five people to work through the tutorials, but do not contain items such as the special collets and tools.



Prices £*		*See Pricing Information on page 2
Replacement Training Packs (serial number of machine required)		
INSPAK-CR	For Craft ROBO - TS	
INSPAK-CR2	For Craft ROBO-TS Pro II	
INSPAK-STIKA	For STIKA STX-7, STX-8, SX-8/E, SX-12/E, SX-15/E, SV-8E, SV-12E, SV-15E	
INSPAK-CAMM1	For CAMM 1 PNC-900/910/950/960/1210, CM-12/24/300, CX-12E, CX-24E, CX-300E	
INSPAK-CAMM1PNC1200	For CAMM 1 PNC-1200	
INSPAK-CX24EO	For CAMM 1 GS-24E, GX-24E, CX-24EO	
INSPAK-SRM20	For SRM-20E	
INSPAK-MDX15	For MODELA MDX-15E	
INSPAK-MDX20	For MODELA MDX-20E	
INSPAK-2300	For CAMM 2 PNC-2300/A, EGX-300E	
INSPAK-EGX350	For EGX-350E	
INSPAK-MDX40A	For RotoCamm MDX-40AE	
INSPAK-MDX40	For RotoCamm MDX-40E	
INSPAK-TS30	For RotoCamm TS-30E	
INSPAK-TS400	For RotoCamm TS-400E	
INSPAK-MDX500	For MODELA PRO MDX-500E, MDX-650E	
INSPAK-MDX540	For MODELA PRO MDX-540E	
INSPAK-LASER	For LaserCAM A3, A3+, A2, A2+, A1+	
Replacement Training Course Booklet & CD		
TA-INSMANUAL-REPLACE	Replacement Training Course Booklet	
TA-INSCD-REPLACE	Replacement Training Course Data CD	

Prices £*		*See Pricing Information on page 2
Materials Only Training Packs		
INSMAT5-CR	For Craft ROBO - TS	
INSMAT5-CR2	For Craft ROBO - TS Pro II	
INSMAT5-STIKA	For STIKA STX-7, STX-8, SX-8/E, SX-12/E, SX-15/E, SV-8E, SV-12E, SV-15E	
INSMAT5-CAMM1	For CAMM 1 PNC-900/910/950/960, PNC-1210, CM-12/24/300, CX-12E, CX-24E, CX-300E	
INSMAT5-CAMM1PNC1000	For CAMM 1 PNC-1000/1000A/1100	
INSMAT5-CAMM1PNC1200	For CAMM 1 PNC-1200	
INSMAT5-CX24EO	For CAMM 1 GS-24E, GX-24E, CX-24EO	
INSMAT5-SRM20	For SRM-20E	
INSMAT5-MDX15	For MODELA MDX-15E	
INSMAT5-MDX20	For MODELA MDX-20E	
INSMAT5-CAMM2	For CAMM 2 PNC-2300/A, EGX-300E	
INSMAT5-EGX350	For EGX-350E	
INSMAT5-MDX40	For RotoCamm MDX-40E	
INSMAT5-MDX40A	For RotoCamm MDX-40AE	
INSMAT5-TS30	For RotoCamm TS-30E	
INSMAT5-TS400	For RotoCamm TS-400E	
INSMAT5-MDX500	For MODELA PRO MDX-500E, MDX-650E	
INSMAT5-MDX540	For MODELA PRO MDX-540E	
INSMAT5-LASER	For LaserCAM A3, A3+, A2, A2+, A1+	

Designs to Inspire and Make

We are often asked for exemplar projects which can be used in schools to inspire students. Obviously, teachers can design and make their own projects, but in the real world of teaching, time pressure often precludes them from actually getting round to it. To help out, TechSoft have put together a range of project ideas for teachers to manufacture on their own.



Whilst the projects themselves are useful as exemplar materials for students, the actual practice of making the projects and studying the designs can act as very useful training and an inspiration to teachers as well!



To access these projects / drawing files simply register online at www.techsoft.co.uk under Free Resources.

The free resources area of our website is the place to visit for:

- Downloadable updates to 2D Design V2, 2D PCB and 2D Primary.
- Machine Printer Drivers
- Designs to Inspire and Make – Sample Files
- Training Course Booklets with Drawing Files
- And lots more to come...

See page 237 for more information.

The Pen Project

The preparation of a full scheme of work can be tedious at the best of times. Given the pressures in teaching these days, time is usually at a premium. If you are currently struggling to find the time to develop your own resources, The Pen Project from TechSoft could well be the answer.



Target Machines :

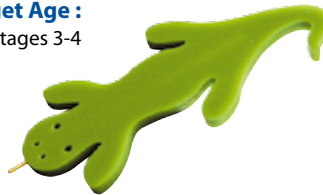
MDX-15E, MDX-20E, MDX-40AE, MDX-40E, TS-30E, TS400E, PNC-2300/A, EGX-300E, EGX-350E, MDX-500E/650E/540E

Required Software :

Design Tools - 2D Design

Target Age :

Key stages 3-4



The TechSoft Pen Project is a lovely introduction to simple 2.5D design and manufacture, and is suitable for students from year 7 through to year 10. By creating a design, students will learn a variety of drawing skills, from using a grid, to creating an interesting shape using bezier curves. The school will simply need to provide 3mm sheet material (Forex classic is ideal), standard tools and double sided tape.

Machining time per project is from approximately 2.5mins on a RotoCAMM, or 5mins on a MODELA. (Times dependent on the material used.)

The pack consists of a project folder with Teachers' Notes, Students' Worksheets, etc. (all photocopyable), a CD containing setup files, etc., plus a copy of all documentation which may be directly printed, and 100 pen refills, ie., all you need to get going.

Prices £*		*See Pricing Information on page 2
TA-PP-PROJECT	The Pen Project (Booklet, Materials & CD)	
TA-PP-PEN100	Replacement mini pen refills (Pk of 100) for the Pen Project	

F1 in Schools Project Package

Schools thinking of entering the F1 Challenge will be delighted to know that they may already have the technology in place to design and build a winning car. The TechSoft F1 in Schools Project Package brings together software and hardware to make the task cost-effective and straightforward. If you already have a TechSoft milling machine compatible with our Self-Centering Vice (see page 91), then you will be off to a flying start.

Design

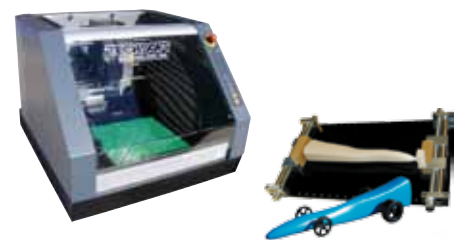
There is an ever growing number of schools who have chosen SOLIDWORKS Education Edition as their 3D CAD solution (see page 18). SOLIDWORKS is supplied with a detailed step-by-step tutorial written specifically for the F1 in Schools challenge.

Analyse

Once you have designed your car, and indeed during the design process, it is important that students are able to analyse their designs and make appropriate design changes. The SOLIDWORKS Education Edition comes complete with a sophisticated suite of Simulation software which allows analysis of CAD models. The SOLIDWORKS F1 in Schools tutorial details the use of Flow Simulation to produce aerodynamic tests.

Make

TechSoft's RotoCAMM MDX-40AE is very much a 3D machine and is ideally suited for machining the car bodies. Using TechSoft's 3D CAM software (Visual Toolpath) and the self-centering vice (with TechSoft's F1 in Schools car fixture) students can accurately machine both sides of their car.



What's in the Package?

The TechSoft F1 in Schools fixture includes a 3mm long reach ball-nosed tool together with fixtures to use with a self-centering vice to machine the car.

Prices £*		*See Pricing Information on page 2
MP-ROTO-MDX40AE	TechSoft/Roland RotoCAMM MDX-40AE (inc TechSoft Training Pack and Visual Toolpath software)	
RL-ROTO-VICE	Self-Centering Vice	
RL-ROTO-VICEVT	Self-Centering Vice and Visual Toolpath	
TA-F1	TechSoft F1 in Schools Fixture	

LaserCAM Servicing and Maintenance

Routine maintenance of LaserCAM machines is largely a matter of cleaning, lubrication and checking filter condition. Full training on what is needed is covered at the time of installation and is backed up with detailed instructions contained within the TechSoft Training Guide. **Maintenance beyond this, including alignment of the laser beam, requires specialist training and equipment and must not be attempted by the user.**



LaserCAM Annual Service / Maintenance Call-Out

Provided user maintenance guidelines are followed carefully and a regular maintenance routine is established, then it will be some time before a LaserCAM needs further attention. Quite how long will depend on use, but many schools opt for an annual service once the warranty period has expired. This service includes cleaning and adjustment of all mechanical and optical systems together with output tests to determine the efficiency of mirrors and lenses. Laser beam alignment is critical to efficient performance so this is checked and adjusted as needed. 'Raw' laser output is measured and this can give an indication of tube life expectancy. Schools will receive a full report following the service.



LaserCAM Standard Call-Out

The most common reason for a LaserCAM failing to give consistent results is misalignment of the laser beam and/or mechanical systems. Age and use will contribute to this, but so too will over-enthusiastic cleaning, accidental knocks and bumps, and moving the machine to a new location. Most of these issues can be solved with a single call-out. Our engineers do not 'clock-watch', but about an hour on-site is usually all that is needed. If component failure is diagnosed, then parts will be charged in addition. In the unlikely event that parts are not available, our engineer will return to complete the repair with no further charges being levied. If a failed laser tube is diagnosed then this call-out charge will be absorbed within the cost of fitting a replacement tube.

CNC Machine Maintenance and Training

Staff changes often mean that expertise is lost and we receive frequent enquiries about elderly (and not so elderly) TechSoft machines 'discovered' by teachers new to a department. Machines include LaserCAMs and many of the TechSoft/Roland knife-cutting and milling/routing systems. In nearly every case, machines can be re-commissioned at very low cost and need only basic maintenance to bring back into service. We will, of course, need to liaise in some detail to check on machine type, condition and likely work needed before calling. A Maintenance and Training Call-Out provides a TechSoft engineer on-site for up to two hours to carry out maintenance and re-commissioning work, with a further two hours to deliver staff training. This can prove an extremely cost-effective way to boost CAD/CAM work in a department.



Workshop Service

Schools have a legal responsibility to maintain workshop equipment in a safe condition that complies with the relevant safety standards. This includes an annual Service Report where the condition and compliance of every machine is noted and any necessary repairs or shortcomings are highlighted for attention.



TechSoft will carry out this work and set up the required service records schools need to retain. These records will detail compliance and make recommendations about any items that fail to meet the required standard. It is the school's responsibility to act on these recommendations. If required, TechSoft will provide a quotation to carry out any remedial work identified.

Servicing includes reporting on all machines, lubrication and adjustment of drive belts, guards and interlocks as needed. Machine repairs (as such) are not included. Larger departments may require more than a single one-day visit, please contact TechSoft for advice prior to booking.



N.B. COSHH responsibilities require all extraction systems to be tested for correct flow rates and filter efficiency. This work is normally carried out by H&S specialists, but, if required, TechSoft can arrange this for you.

Prices £*

*See Pricing Information on page 2

Code	Description	Price
CALLOUT_S	Standard Callout for 1 TechSoft CNC machine (UK Mainland). Includes fault diagnosis & repair. Excludes cost of any parts required.	
CALLOUT_M	Maintenance Callout / Annual Service for one TechSoft CNC Machine (UK Mainland). Includes fault diagnosis & repair, service including safety check and report, belt tensioning, lubrication, etc. Excludes cost of any parts required.	
CALLOUT_MT	Maintenance Callout / Annual Service / Training for one TechSoft CNC machine (UK Mainland). Included fault diagnosis & repair, service including safety check and report, belt tensioning, lubrication, etc. Also includes a brief training refresher for new staff members using the equipment, eg., LaserCAM. Excludes cost of any parts required.	
CALLOUT_VC	Maintenance Callout / Annual Service for multiple TechSoft CNC machines (UK Mainland). Includes fault diagnosis & repair, service including safety check and report, belt tensioning, lubrication, etc. Excludes cost of any required. One engineer on-site for 1 day max (additional consecutive days chargeable at £395+VAT).	
CALLOUT_VCA	Additional Day/Engineer for CALLOUT_VC	

Training Course Booklets with Drawing Files

TechSoft offer 'scheduled' courses throughout the year at regional venues (see page 232). These are enjoyed by many teachers, who find the content stimulating and helpful by providing exemplars of good practice. The projects that these courses are based on are also available online free of charge. Teachers may print out booklets and download drawing files that provide complete product based courses that they can use for their own training or can also be given to students to follow. Topics available include:

- CAD/CAM for Engineering at KS4
- CAD/CAM Projects for KS3
- Computer Aided Design for Key Stage 2
- Lasers in Design and Technology
- Getting the Best from 2D Design V2
- SolidWorks - Emergency Stop
- Textiles - 2D Design V2 For Textiles Teachers
- Textiles - Laser Cutting with 2D Design V2
- Textiles - Knife Cutting with 2D Design V2



To access these projects / drawing files simply register online at www.techsoft.co.uk under Free Resources.

The free resources area of our website is the place to visit for:

- Downloadable updates to 2D Design V2, 2D PCB and 2D Primary.
- Machine Printer Drivers
- Designs to Inspire and Make – Sample Files
- Training Course Booklets with Drawing Files
- And lots more to come...

See page 237 for more information.

Bespoke Training Courses

The courses listed on page 232 are all scheduled for the coming year but they are only a snapshot of what we can offer. A lot of our training work – particularly in the Summer Term – is prepared for groups of schools collaborating for an area CPD day, or is written specifically to meet the needs of an individual department. We liaise with numerous teacher training organisations including Universities and GTP/PGCE consortia. Many book an annual presentation from us, to bring students up to speed with the latest developments in CAD/CAM, and to illustrate the ways in which schools are adopting the technology. We are able to bring a national perspective to this, which is often a valuable way for students to put into context their experiences in the limited number of schools they are able to work in when training.



Occasionally schools involve students as well as staff in 'bespoke' training programmes and we welcome this. It can prove to be a highly successful way to launch a project or to generate 'student mentors' to help embed new ideas and start networking and sharing ideas – something that young people are particularly good at.

The titles below are all successful courses that have been run previously. These might be just what you are looking for, or might provide a template for a bespoke course that we will write for you.

Projects for KS3 - Pupil's First Steps with CAD/CAM

For existing or new 2D Design users. Includes tips for managing and troubleshooting pupils' work and some 'golden rules' to avoid pitfalls. The course focuses on basic CAD/CAM skills and inclusion for all pupils as part of their D&T entitlement.

Textiles and CAD/CAM

The main focus is to inspire Textile teachers and allow some hands-on experience. 2D Design V2 is used to create designs for knife cutting, embroidery, laser cutting and sublimation printing. No previous knowledge of 2D Design or CAD/CAM is required.

3D Manufacturing in Schools

The course demonstrate two systems of rapid prototyping; SRP (subtractive rapid prototyping) and FDM (fused deposition modelling). It's a fascinating field and essential grounding for Design and Technology, Engineering and Product Design.

CAD/CAM for Engineering Diploma

Schools teaching the new Engineering Diploma will need access to the latest tools for generating drawings and for testing ideas. 2D Design and SolidWorks provide all the tools needed and the course will allow delegates to 'test-drive' (and take away) TechSoft's materials which deliver the CAD/CAM needed for L1, L2 and L3 Diplomas.

Courses to suit you can be run at our Head Office in North Wales, or you may wish to host an event yourselves. Whatever your requirements, contact your area Training Manager (see page 5), or TechSoft head office, and we will be happy to look at possibilities.

Prices £*		*See Pricing Information on page 2
CR-INSET-TECHSOFT	1 Day Bespoke Training Course at TechSoft* (Maximum 10 attendees)	
CR-INSET-SITE	1 Day Bespoke Training Course at School Site*	

* Prices are per course and not per person.

CAD/CAM Training Courses

The following 'scheduled' courses are offered throughout the year at regional venues. Delegate fees include lunch and refreshments as appropriate. We have many more options available and will be happy to discuss 'bespoke' packages to meet particular needs. Many schools, colleges and universities opt to host a course and invite neighbouring schools – provided delegate numbers are sensible then we are happy to support this, but please get in touch first to discuss your ideas. All our courses include a delegate certificate for CPD records.



For details of current venues and dates please see www.techsoft.co.uk/Training

<h4>CAD/CAM Overview</h4>  <p>This full day course provides an opportunity to broaden your knowledge of CAD/CAM and understand how it can be integrated into your teaching. It will show by practical demonstration how 2D Design V2 and SolidWorks can be used to develop a variety of innovative projects for the KS3 – KS5 curriculum. The day will have relevance to all material areas in Design and Technology and will exploit the full range of TechSoft machines. This is not a detailed training day (as such), but a chance to get a feel for the range of CAD/ CAM technologies available and how they can make a real difference for student projects.</p>	<h4>Getting the Best from 2D Design</h4>  <p>2D Design has been the standard for 2D CAD in education for many years and all the familiar 'technical drawing' tools are as relevant today as they ever were. This course aims to sharpen knowledge to achieve good geometry and will explore new tools for creating stunning graphics, alongside or to enhance, conventional geometric drawings. The course is fully hands-on and delegates will create typical student projects that exploit all the techniques covered.</p>
<h4>Getting Started with SolidWorks</h4>  <p>SolidWorks is world-class 3D CAD which is well established as a market leader for commercial 3D design and engineering. With a friendly interface and intuitive routines SolidWorks is now in daily use in hundreds of school and has revolutionized what can be achieved with 3D design. This course is aimed at beginners and will provide all you need to get started with basic modelling routines. These include developing a modelling strategy and the basic tools needed to create 3D parts. Particular emphasis will be placed on using model history to keep on top of what is being created and to enable editing.</p>	<h4>Getting the Best from SolidWorks</h4>  <p>SolidWorks is fast becoming the standard for 3D CAD in education with hundreds of schools now using the software. The course is an excellent way for teachers already using 3D CAD to refresh the basics, to sharpen their knowledge and explore how SolidWorks provides the evidence students need for design iteration, testing and evaluation. More advanced part modelling, assemblies, finite element analysis, photo rendering and animation will be covered. The course is fully hands-on and delegates will create typical student projects that exploit all the techniques covered.</p>
<h4>2D Design for Textiles</h4>  <p>2D Design is a fantastic resource for students to create original designs for Textiles work. The CAD files produced can be used for CNC embroidery, laser-cut and engraved fabric, heat applied vinyl, and sublimation printing – to name just a few. This fully hands-on course gives delegates the opportunity to create and print their own fabric using sublimation printing and much more besides. There will be masses of example projects and specialist materials to inspect so cameras are welcome. Delegates keep the samples they produce so there will be lots of ideas to take back to the classroom!</p>	<h4>Lasers in Design and Technology</h4>  <p>TechSoft have been installing laser cutters for over ten years so it's not surprising that the teachers and technicians using them now may have missed out on initial training. This course is designed to bring all laser users up to speed with essential H&S responsibilities and how to maintain their machine for safe, reliable and efficient performance. Beyond these essentials, the full day course will explore an extensive range of laser applications and will include managing and troubleshooting student projects. The course will be hands-on using TechSoft LaserCAM machines but will be of general relevance to all laser users.</p>
<h4>Getting Started with CAD/CAM - KS2/3</h4>  <p>This course aims to give those new to CAD/CAM, the knowledge they need to introduce 2D Design in the classroom. There will be tips to help pupils develop good habits with CAD and some 'golden rules' to avoid pitfalls. The day is fully hands-on and delegates will be led through projects which will exploit knife cutting, milling and laser cutter machines. Implications for incorporating such projects into all areas of the KS2/3 curriculum will be explored. The course focuses on basic CAD/CAM skills and will use 2D Primary and/or 2D Design V2 depending on the mix of delegates on the day.</p>	<h4>3D Technology for D&T Students</h4>  <p>3D CAD with Rapid Prototyping has revolutionised product design and soon may be commonplace in the home. No more waiting for the latest gadget or part to be shipped – just download the file and print it yourself. This course will show how SolidWorks can be used to create a component and fully test it before it leaves the desktop. Using the latest technology, 3D machining as well as 3D Printing will be demonstrated. The course aims to be a technology update and provide teachers with the facts they need to successfully develop 3D resources and enable students to use 3D techniques in their work.</p>

Terms of Trading

These terms are incorporated in all contracts for the sale of goods or systems ("goods") between TECHSOFT UK LIMITED ("the Company") and Customers for the goods ("the Customer").

1. TERMS

- 1.1** Orders are accepted only on these terms.
1.2 Any variation of these terms in any document or otherwise without the written consent of the Company shall have no effect and, for the avoidance of doubt, any endorsement made on this contract or on any other document passing between the parties shall not be deemed to be a valid variation.
1.3 The clause headings do not form part of the contract.
1.4 Subject to clause **6.8.4** the Company and the Customer acknowledge that they have not entered into this agreement in reliance on any representation or statement made by the Company not expressly set out in this contract and as such the Company and Customer accept that this contract forms the entire agreement between them.

2. DELIVERY

- 2.1** Delivery is deemed to take place at the Company's place of business.
2.2 Time shall not be of the essence with regard to delivery.
2.3 Any time quoted is an estimate only and the Company shall not be liable for failure to deliver within the time quoted.
2.4 The Company reserves the right to implement any systems in stages.
2.5 The Company shall not be liable for any non-delivery of goods (even if caused by the Company's negligence) unless the Customer gives written notice to the Company of the non-delivery within 7 days of the date when the Goods would in the ordinary course of events have been received.
2.6 Any liability of the Company for non-delivery of the goods shall be limited to replacing the goods within a reasonable time or issuing a credit note at the pro rata contract rate against any invoice raised for such goods.

3. PRICES

- 3.1** The price for the Goods shall be exclusive of any value added tax and all costs or charges in relation to packaging, loading, unloading, carriage and insurance, all of which amounts the Buyer shall pay in addition when it is due to pay for the Goods.
3.2 The Company reserves the right to vary the price of the goods by any reasonable amount attributable to any variation between the date of the contract and the date of delivery of the goods arising from fluctuating rates of exchange or costs of any other nature.

4. PAYMENT

- 4.1** Time for payment of the price shall be of the essence and in the case of any payment made after credit has been granted to the Customer time shall be of the essence in relation to each payment.
4.2 Where credit is granted to the Customer payment is due 30 days from the date of the invoice unless otherwise agreed in writing.
4.3 Interest will be charged on all overdue accounts at the rate of 2% per calendar month or part thereof and such interest shall continue to be payable after any judgment.

5. SET-OFF AND LIEN

- 5.1** No payments may be withheld nor may any counterclaims of the Customer be set off against any payment due to the Company without the written consent of the Company.
5.2 The Company shall have a general and particular lien on all money and property of the Customer in possession of the Company or its agents.
5.3 The Customer authorises the Company to sell such goods and to apply the proceeds of sale towards any indebtedness of the Customer to the Company.

6. WARRANTY AND LIABILITY

- 6.1** The Company will endeavour to transfer to the Customer the benefit of any warranty or guarantee it has in respect of goods manufactured by any third party but shall have no liability under such warranty.
6.2 The Customer warrants that it shall only use the goods in accordance with any operations manual or other user guidelines supplied with the goods or made available by the manufacturer and insofar as the Company may suffer any loss howsoever arising as a result of the Customer's breach of this warranty the Customer hereby indemnifies the Company against any such loss.
6.3 The Customer warrants that the goods shall, at all times, be used by persons properly trained to operate the goods or, where the person operating the goods is not properly trained to do so, that person shall be adequately supervised by a person who is suitably trained and the Customer indemnifies the Company for any loss that it might suffer as a result of the Customer breaching this clause.
6.4 The Customer warrants that it shall take reasonable care of the goods until such time as title in the goods passes to it in accordance with clause **8.1** of this contract.

- 6.5** The Customer, until such time as title in the goods passes to it in accordance with clause **8.1** of this contract, warrants that the goods are fully insured with a reputable insurance company and that the Company's interest in the goods are noted on any such policy.
6.6 Under no circumstances shall the liability of the Company in connection with defective goods exceed the net invoice price of such goods.
6.7 Except where the Customer is dealing as a consumer all warranties, conditions and other terms implied by statute or common law (save for the conditions implied by section 12 of the Sale of Goods Act 1979) are, to the fullest extent permitted by law, excluded from the Contract.
6.8 Nothing in this contract excludes or limits the liability of the Company:
6.8.1 for death or personal injury caused by the Company's negligence; or
6.8.2 under section 2(3), Consumer Protection Act 1987; or
6.8.3 for any matter which it would be illegal for the Company to exclude or attempt to exclude its liability; or
6.8.4 for fraud or fraudulent misrepresentation.
6.9 Subject to clause **6.7** and clause **6.8** of this contract:
6.9.1 the Company's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the performance or contemplated performance of the Contract shall be limited to the Contract price; and
6.9.2 the Company shall not be liable to the Buyer for any pure economic loss, loss of profit, loss of business, depletion of goodwill or otherwise, in each case whether direct, indirect or consequential, or any claims for consequential compensation whatsoever (howsoever caused) which arise out of or in connection with the Contract.
6.10 In contracts for the supply of computer hardware or software a copy of the Customer's complete specification for the performance of the same is annexed hereto and if no such specification is annexed the Customer's requirements shall be conclusively deemed to be fulfilled by the supply by the Company of such items as it shall in its absolute discretion think fit.
6.11 The parties have freely negotiated the contract including the price in the knowledge that the liability of the Company is to be limited in accordance with these terms. The Customer acknowledges that a higher price would be payable but for such limitation.

7. FORCE MAJEURE

- The Company shall not be under any liability of any kind for non-performance in whole or in part of its obligations under the contract due to causes beyond the reasonable control of the Company. In any such event the Company may without liability cancel or vary the terms of the contract, including but not limited to extending the time for performing the contract for a period at least equal to the time lost by reason of such causes.

8. RETURNS

- 8.1** The Customer may return goods to the Company:
8.1.1 if the Customer is a consumer within seven working days, beginning on the day after the Customer received the goods. The Customer shall be entitled to a full refund of the price of the goods and any applicable delivery charges. The Customer will be responsible for the cost of returning the goods to the Company;
8.1.2 if the Customer is returning the goods where the goods have been sent out in error, the goods have been damaged in transit or the goods become faulty within 28 days of the date on which the Customer receives the goods ("28 Days"). The Customer shall be entitled to a full refund of the price of the goods, a refund of any applicable delivery charges and a refund of the reasonable costs of returning the goods to the Company;
8.1.3 if the Customer is returning goods which do not fall into categories 8.1.1 or 8.1.2 above:
8.1.3.1 if such goods are standard items which are available in the Company's product guide or on the Company's website from time to time ("Standard Items");
8.1.3.2 provided that such Standard Items are returned in their original condition in their original packaging and have not been used; and
8.1.3.3 provided that such goods are returned within 28 Days. The Customer shall be entitled to a full refund of the price of goods less the cost of any applicable delivery charges. The Customer shall be responsible for the cost of returning the goods to the Company.
8.2 If a Customer is seeking to return goods, within 28 Days, which are not Standard Items which the Company has sourced from a third party supplier on behalf of the Customer, the Customer will not be entitled to return such goods unless the Company has come to an agreement with the third party supplier in relation to the return of such goods. In these circumstances the Customer should contact the Company before returning the goods. If the Company is able to agree terms for the return of goods with the third party supplier the Company will inform the customer of that fact and of the administrative charge or re-stocking fee which will be incurred by the Customer as a consequence of the return (which will be a minimum of 20% of the price of the goods). The Customer shall be responsible for the cost of returning the goods to the Company.

9. TITLE

- 9.1** Title to the goods comprised in each invoice rendered under this contract shall not pass to the Customer until the Company has been paid all sums due to it in respect of the goods and all other sums which are or which become due to the Company from the Customer on any account.
9.2 Until title passes under sub-clause (a) above then the Customer shall hold the goods as bailee for the Company and the Customer shall be in a fiduciary position to the Company in respect of goods (and in respect of any proceeds of sale also).
9.3 Until title passes under sub-clause (a) hereof, the Company may at any time (regardless of any period of credit given to the Customer) enter onto the premises of the Customer or of its agents or Customer to re-possess all or part of the goods and upon such re-possession on the contract shall terminate in respect of such goods only but without prejudice to any rights of the Company.

10. RISK

- 10.1** Risk in the goods shall pass to the Customer when the goods are dispatched by the Company
10.2 Until title passes the Customer shall indemnify the Company against all loss or damage to the goods or depreciation in their value.

11. SEVERANCE

- If any of these terms is unenforceable or void at law, it shall not affect the remainder of them or the contract and it shall be deemed to be excluded from these terms and where possible to be replaced by an enforceable and valid term as near as may be to the original in both form and effect.

12. INDEMNITY BY CUSTOMER

- The Customer shall indemnify the Company from any claim expense or liability in respect of any breach by the Customer of any of these terms.

13. INTELLECTUAL PROPERTY RIGHTS

- 13.1** All intellectual property rights and know-how in any goods, design, document, software, program, invention, technique or information made or compiled in connection with the subject matter of this contract shall belong to the Company and the Customer will respect their confidentiality.
13.2 The Company hereby licences the Customer to lawfully use the software and literature for such period as it retains possession of the disks and ROMs onto which the software has been entered. The Customer shall not copy or attempt to copy the software or literature nor allow any other person to do so and shall indemnify the Company against any loss it may suffer as a result of any breach by the Customer of this clause.
13.3 Insofar as the Company does not own the intellectual property arising out of or in relation to the subject matter of this contract the Company agrees to licence, insofar as it is authorised to do so by the owner of the intellectual property rights involved, to the Customer those intellectual property rights for use solely in connection with the goods and the Customer hereby agrees to indemnify the Company against any loss the Company may suffer as a result of it granting any such licence to the Customer or the breach by the customer thereof including but not limited to loss of profit, loss of business and any damages or costs ordered or agreed to be paid to any party in connection with the licence and whether arising indirectly, consequentially or otherwise.

14. TERMINATION BY COMPANY

- If the Customer fails to comply with any term of the contract; or commits any act of bankruptcy; makes an arrangement with creditors or suffers any distress or execution; or is ordered to be wound up or has a receiver or administrator appointed or has a resolution or petition to wind up its business past or present then the Company shall have the right (without prejudice or any other rights or remedies) to cancel any contract or part to withhold delivery of goods and demand payment of all sums due by the Customer to the Company.

15. THIRD PARTY FINANCE

- 15.1** Where the goods are to be purchased or funded by a third party for the use of the Customer, the Customer shall nevertheless be liable for the full amount of the purchase price unless and until the price has been fully paid by the third party.
15.2 The Customer warrants that any third party financier has been put on notice of and shown a copy of this terms of trading and the Customer indemnifies the Company for any loss it may suffer as a result of a third party financier not being put on notice of the applicability these terms.

16. INSTALLATION

- Where the Company contracts to install or commission goods the Customer shall provide all necessary power connections and staff and other facilities and a suitable environment and if installation is delayed due to non-availability or inadequacy of any of these the Company shall be entitled to charge extra accordingly.

17. GENERAL

- 17.1** The parties to the Contract do not intend that any term of the Contract shall be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person that is not a party to it.
17.2 The formation, existence, construction, performance, validity and all aspects of this contract shall be governed by English law and the parties submit to the exclusive jurisdiction of the English courts.

Index

:MOVE Mini Buggy	95	BF1000 Box Folder	170	Circular Saws	144-145	Double Fretsaw Workstation	153
1210 Vacuum Former	178	BF620-2 Box Folder	170	Circular Saws: Blades	184	Double Mug Press	123
200FD Oven	182	Bib	128	Clam Press - A4 Pink	123	Double Sided Tape: Knife Cutting	48
2D Design	12-13	Bin: Clay Storage	135	Clamps	198	Double Sided Tape: Milling	87
2D PCB	14-15	Birch Plywood	29	Clarke Vacuum Formers	178	Down Draught Table	191
2D Primary	16-17	Blade Knife	195	Clarke Hot Wire Cutter	181	Dremel Multi Tools	202
2D Software	12-17	Blades: Bandsaw	184	Clarke Hot Wire Strip Heaters	180	Dremel PCB Drilling Station	97
2M2 Guillotine	170	Blades: Circular Saw	184	Clarke Injection Moulder	181	Dressmaker's Dummy	113
3D Design Software	18-20	Blades: Fretsaw	184	Clarke Oven 200FD	182	Drill Set	197
3D Manufacturing Software	21	Blades: Hand Saws	192-193	Clarke Plastic Dip Coating System	182	Drills: Bench and Floor	158-160
3D Pens	63	Blades: Knife Cutters	49	Clarke Profile Router 145	179	Drills: Hand Tools	203-204
3D Printer Materials	54, 60-62	Blades: Mitre Saw	184	Clarke R25 Schredder	183	Drying Racks	132
3D Printer Materials - MakerBot	61	Blades: Panel Saw	184	Clarke R30 Sheet Press	183	Dummy	113
3D Printer Materials - Robox	60	Blades: Planer Thicknesser	184	Clarke Strip Heaters	180	Dust Extraction	186-190
3D Printer Materials - Ultimaker	61	Blanca Press	113	Clarke Strip Heater Consumables	185	Dust Extraction Bags: RJH	184
3D Printer Materials - Witbox	54	BN-20	36-37	Clarke Thermoforming Centre	179	Dust Extraction Nozzle	190
3D Printers	51-59	Board: Modelling	90	Clarke Vacuum Formers	178-179	Dustpan and Brush	202
3D Printers: Comparison Chart	52	Board: PCB	89	Clay (Precious Metal)	130-131	Easels	133
3D Printers: Consumables	54, 60-62	Bondaweb	112	Clay Damp Cupboard	137	ECS 250 / 315 Metal Cut-Off Saws	166
3D Printers: MakerBot	56	Bookmarks	127	Clay Slab Roller	135	Education Training Packs	228
3D Printers: Overview	51	Booths: Extraction	191	Clay Storage Bin	135	EGX-300E Tools	86
3D Printers: Robox	53	Booths: Screen Washout	140	Clay Trap	135	EGX-350E	68
3D Printers: Roland ARM-10	57	Bosch GCM 12GDL Mitre Saw	151	Clay Wedging Bench	135	EGX-350E Tools	86
3D Printers: Mojo	58-59	Bosch Multi Tool	202	Cleaning Kits: LaserCAM	26	eLearning	227
3D Printers: Ultimaker	55	Bott Cupboards	218-219	Cleaning Kits: TrueVIS	48	Electricity: Basic	92
3D Printers: uPrint SE	58-59	Box Folders	170	Clip: Vinyl	48	Electronic Control & Coding	93-96
3D Printers: uPrint SE Plus	58-59	Boxford Combined Machine	78	Clocks	127	Electronics	14-15, 92-99
3D Printers: Witbox 2	54	Boxford Lathes	77	Cloth - Microfibre	202	Electronics Software	14-15
3Doodler Create	63	Boxford Mills	76	Clothing	116-117	Embroidery	102-107, 110-111, 224
3Doodler Start	63	Brazing Hearths	172-175	Coding	93-96	Embroidery Enterprise Packs	224
3M2 Guillotine	170	Bronze Clay	131	CNC Engravers	64-71	Embroidery Felt	111
725 FLB Vacuum Former	178	Brother 3034DWT Overlocker	109	CNC Knife Cutters	32-39	Embroidery Machines	104-107
750 FLB Vacuum Former	178	Brother CV3550 Coverstitch	109	CNC Laser Cutters	23-25	Embroidery Software	102-103
A3+ Heat Press	123	Brother Embroidery Machines	104-107	CNC Lathes	75, 77	Embroidery Threads	110-111
A4 Pink Heat Press	123	Brother Embroidery Software	102-103	CNC Machine Maintenance	230	Embroidery Workstation	206
ABS	60-62	Brother Embroidery Threads	110	CNC Machine Training	230	Engineers Square	199
Acrylic	27	Brother Innov-is 15	108	CNC Milling Machines	64-78	Engravers	64-71
Adhesive - Wood	155	Brother Innov-is 275E	108	CNC Plasma Cutter	30-31	Engravers: Impact	129
Adhesive Remover	48	Brother Innov-is 35	108	CNC Router	72-73	Engraving Laminates: Lasers	28
Advice	5	Brother Innov-is 55FE	108	Coasters	126, 128	Engraving Laminates: Rotary	88
Air Compressor	98	Brother Innov-is F440E	106	Coloured Acrylic	27	Engraving Machine Comparison	64
Airbrush Kit	133	Brother Innov-is F480	107	Coloured Vinyl	41	Enterprise	221-226
Alloy - Low Melting Point	171	Brother Innov-is NV2600	107	Combination Machines	148-149	Enterprise Packs: Embroidery	224
Alpha Stac Tek Stools	212	Brother Innov-is NV800E	106	Combined CNC Lathe and Mill	7	Enterprise Packs: Knife Cutting	223
Alpha Tables	213	Brother Innov-is V3	106	Company Information	58	Enterprise Packs: LaserCAM	225
Angle Grinder	203	Brother Innov-is V5	107	Comparison Chart: 3D Printing	52	Enterprise Packs: Sublimation	222
Antelope Bandfacer	163	Brother PE Design 10	102-103	Comparison Chart: Knife Cutting	32	Enterprise Packs: TrueVIS	226
Anti-Static Cleaner	48	Brother PE Design Plus 2	102-103	Comparison Chart: Milling	64	ESTA Dustomat 10	189
Application Film	49	Brother PR-1050X	104-105	Comparison: Laser Cutting	23	Etch Tanks	99
Application Liquid	48	Brother PR-670E	104-105	Compressor	98	E-Textiles	114-115
Applicators (squeegees)	48	Brother Sewing Machines	107-108	Computer Workstations	215	E-Textiles Kit for BBC micro:bit	114
Aprons	117	Brother Threads	110	Computerised Embroidery	102-107, 224	E-Textiles Starter Kit	114
ARM-10	57	Brushes	195, 198, 202	Conductive Material	115	ETM-2VS Turret Mill	169
Art Equipment	130-140	Buggy	95	Conductive Thread	115	ETM-3VS Turret Mill	169
AT1628VS Wood Lathe	156	Buzzer: Sewable	114	Contents	3-4	Extraction: Booths	191
AT2030VS Wood Lathe	156	C30E Genius Combo Machine	148-149	Control	93-96	Extraction: Down Draught Table	191
Auto Switch Box	91, 190	C612N A4 Printer	119	Copper Clay	131	Extraction Filters	26, 184
Automatic Tool Changer	69	C7411WT White A4 Printer	119	Coverstitch	109	Extraction Kit for Soldering Irons	98
B17, B23 Bench Drills	158	C8432WT White A4 Printer	119	Cowley Potters Wheel	136	Extraction: LaserCAM	26
B26, B33 Floor Standing Drills	158	Cabinet Scrapers	197	CraftROBO Consumables	49	Extraction: Solder Fume	191
Baby Items	128	Cabinets	216-219	Creasing Tools	49	Extraction: Workshop	186-191
Backing Material	112	Cables	173, 175	Crucible Furnace	173, 175	Extraction Systems: Centralised	186
Back Packs	127	CAD Drawings	10	Crystals	111	Extraction Systems: Local	187-188
Bagpress	154-155	CAD/CAM in Education	6	CU300E Combo Machine	148-149	Extraction Systems: Mobile	189-190
Bags	126	CAD/CAM Overview	6	Cupboards	216-219	Eyelet Press	47
Bailey Potter's Wheel	136	CAD/CAM Packages	9	Cupboards: Damp	137	Eyelets	194
Bandfacers	163	CAD/CAM Systems	7-8	Cupboards: Pottery	137	F1 in Schools Project Package	229
Bandfacers: Consumables	184	CAD/CAM Training Courses	231-232	Cutronic Foil	44	Fabric Transfer Paper	124-125
Bandsaws: Blades	184	CAD/CAM Workstations	205-206	Cutters: Snips	194	FastPress	113
Bandsaws: Metal	165	Calipers	199-200	Cutters for Knife Cutting	49	Feeler Gauges	200
Bandsaws: Wood	142-143	CAMM 1 GS-24E, GR Series	34-35	Cutters and Moulds for PMC	131	Felt	111
Banners	46-47	Cantilever Workstations	214	Cutting Mats	195	Files	195
Banner Stands	46	Canvas	46	CVAC	186	Film: Application	48
Baseball Caps	117, 126	Canvas Frame Kits	46	Damp Cupboard	137	Filter Bags - RJH machines	184
Batteries	115	Cap/Pocket Press	122	DB1100 Wood Lathe	156	Fireworker Kiln	138
BBC micro:bit	93-95	Caps	44, 117, 126, 128	Deburring Tools	195	Flamefast Heat Treatment	172-173
BEAR 1 Tool Sharpener	161	Card	43	Decovil 1	112	Flashing LED Kits	114
Bed Strips	49	Carriage Charges	2	Decovil Light	112	FLB1000 Hot Wire Strip Heater	176
Belts - Bandfacer	184	Cartridges	49, 128	Deer Bandfacers	163	FLB500 Hot Wire Strip Heater	176
Bench Drills	97, 158-160	Cases and Pouches for LIT	126	Delivery Charges	2	Flexible Veneer	29
Bench Stones	198	Casting	171, 173, 175	Design & Technology eLearning	227	Flip Flops	126, 128
Benches: CAD/CAM	205-206	CEL Robox	53	Design and Planning	10	Flock - Heat Applied	44
Benches: Cantilever	214	Centralised Extraction	186	DesignaKnit 8	101	Flock - Heat Applied Printable	45
Benches: Clay	135	Ceramaster Kilns	139	Designs to Inspire and Make	229, 237	Floor Standing Drills	158-160
Benches: Computer	205-206, 215	Ceramicon Transfers	43	Desks	213-215	Fluorescent Transparent Acrylic	27
Benches: Moulding	173, 175	Ceramics	134-140	Dial-Test Indicators	200	Foam: Modelling	90
Benches: Side	211	Chairs	212	Dip Coating	182	Foam: Polyethylene	28
Benches: Welding	173, 175	Chamois Polisher	164	Dip Coating Consumables	185	Foam: Rigid PVC	87
Benches: Workshop	208-211	Chip Forges	172-175	Display Board	126	Foil: Metallic	125
Bespoke Training Courses	231	Chisa Morticer	141	Dividers - Spring	200	Food Grade Polyethylene	89
Bevels	201	Chisel Sets	197	DIWire	50	Forex Classic	87

Forges 172-175	Inventors Kit 95	Mallets 193	Panel Saws 150
Formech Strip Heaters 176	Ironing Table 113	Manual Lathes : Metal 166-167	Panel Saws: Blades 184
Formech Vacuum Formers 176-177	Iron-On Flock 44	Manual Lathes : Wood 156-157	Paper: Plotter 43
Frame Kits: Aluminium 46	Iron-On Vinyl 44	Manual Milling Machines 168-169	Paper: Printable 42
Frame Kits: Card 46	Irons and Presses 113	Marking Out 200-201	Paper Trimmers 133
Free Resources 237	Jelutong 89	Materials Packs: Knife Cutting 47	Patriot Chuck 157
Fretsaw Blades 184	Jewellery 129-131	Materials Packs: Laser Cutting 29	Payment Details 2
Fretsaw Stands 153	Jigsaws 126, 127	Materials Packs: Milling 91	PCB Drill 97
Fretsaw Workstation: Hegner 153	Jigsaws: Hand Tool 203	Materials: 3D Printing 54, 60-62	PCB Etch Tanks 99
Fretsaws 151-153	KC6S 75	Materials: Knife Cutting 40-47	PCB Guillotines 97
Fretsaws: Hegner 152	Kick Wheel 135	Materials: Laser Cutting 27-29	PCB Labstation 99
Fretsaws: Swordfish 151	Kilns 138-140	Materials: Laser Image Transfer 124-126	PCB Manufacture 14-15, 97-99
Frosted Vinyl 41	Knife Cutter Materials 40-49	Materials: Milling 87-91	PCB Materials: Cutronic Foil 44
FS30E Planer Thicknesser 146-147	Knife Cutters 32-39	Materials: Sewing 110-117	PCB Materials: Laminate 89
FS41E Planer Thicknesser 146-147	Knife Cutters Comparison 32	MDF: Medite Laser Grade 29	PCB Software 14-15
Furnaces 172-175	Knife Cutting Accessories 48-49	MDX-40AE 66-67	PE Design 10 102-103
Gabro Box Folders 170	Knife Cutting Enterprise Packs 223	MDX-40AE Tools 81	PE Design Plus 2 102-103
Gabro Guillotines 170	Knife Cutting High/Low Tack Tape 48	MDX-50E 69	PECT Trunking 98
Gauges 199-201	Knife Cutting Machines 32-39	MDX-50E Tools 82	Peelable Printable Vinyl 42
Gemstones: Glue On 111	Knife Cutting Workstation 205	MDX-540E 70-71	Peelable Vinyl 41
Gemstones: Heat Applied 45, 111	Knife Set 195	MDX-540E Tools 83	Pen Project 229
Gerbil 2010, 2020, 2030 177	Knitting Machines 101	Measuring 200-201	Pens: Plotter 43
Gerbil Accessories 185	Knitting Software 101	Meddings Drills 160	PETG 60-61
Glitter Vinyl 41	Knives 195	Medite 29	Pewter 171
Gloves 26, 31, 57	Koolkut Vertical Panel Saw 150	Metal Bandsaws 165	PhotoVCarve Software 22
Glue Guns 204	KV40 Metal Vertical Bandsaw 165	Metal Cut-Off Saws 166	Pillar Drills 158-160
Glue Spreader 155	KX1S, KX3S 74	Metal Lathes 75, 77-78, 166-167	PLA 54, 60-61
Graduate Wood Lathes 157	Labstation 99	Metal Mills 74, 76, 78, 168-169	Placemats 126, 128
Grinders 162	Laminates: Laser Engraving 28	Metal Working Machines 169-170	Planer Thicknessers 146-147
Gryphon Grinder 162	Laminates: PCB 89	Metallic Foil 125	Planer Thicknessers: Blades 184
GR-420/540/640 34-35	Laminates: Rotary Engraving 88	Metaza MPX-95 129	Planes 197
GS-24E 34-35	Lamp: Magnifier 201	MH20V/22V/22VD Milling/Drilling 168	Plasma Cutter 30-31
Guillotines: Metal 170	Laser Buying Guide 23	MH35V/50V Milling/Drilling 168	PlasmaCUT 30-31
Guillotines: PCB 97	Laser Cutting 23-25, 225	micro:bit 93-95	Plastazote 28
Hammers 193	Laser Cutting Consumables 26	Microfibre Cloth 202	Plastic: Modelling 90
Hand and Foot Printing Kit 131	Laser Cutting Extraction 26	Micrometers 199	Plastic Dip Coating System 182
Hand Drill 196	Laser Cutting Materials 27-29	Mild Steel 31	Plastic Recycling 183
Hand Tools 192-202	Laser Engraving Laminates 28	Miller/Router Workstation 205	Plastic Shredder 183
Hazardous Storage Cupboards 218	Laser Extraction Filters 26	Milling Machine Comparison 64	Plastic Sheet Press 183
Hearths 172-175	Laser Grade Birch Plywood 29	Milling Machines: CNC 64-74, 76, 78	Pliers 194
Heat Application Accessories 45	Laser Grade Italian Poplar Plywood 29	Milling Machines: Manual 168-169	Plotter Paper 43
Heat Applied Flock 44	Laser Grade MDF (medite) 29	Milling Materials 87-91	Plotter Pens 43
Heat Applied Gemstones 45	Laser Image Transfer (LIT) 118-119	Milling Materials Packs 91	Plywood: Flexible 155
Heat Applied Glitter Vinyl 45	Laser Image Transfer Materials 124-126	Milling/Drilling Machines 168	Plywood: Laser Grade Birch 29
Heat Applied Printable Flock 45	Laser Material Packs 29	Mini T-Shirts 126	Plywood: Laser Grade Poplar 29
Heat Applied Printable Vinyl 45	Laser Tubes 26	Minimax Bandsaws 142-143	Plywood: Thin 155
Heat Applied Vinyl 44	LaserCAM 24-25	Minimax Circular Saws 144-145	PNC-2300, 2300A Tools 86
Heat Guns 204	LaserCAM Cleaning Kits 26	Minimax Combo Machines 148-149	Pneumatic Air Compressor 98
Heat Presses 122-123	LaserCAM Enterprise Packs 225	Minimax Dust Extraction System 189	Polishers 164
Heat Resistant Application Film 48	LaserCAM Extraction 26	Minimax Planer Thicknessers 146-147	Polo Shirts 116
Heat Tape 125	LaserCAM Materials 27-29	Mitre Saw 151	Polyethylene: Foam 28
Heat Treatment 172-175	Laser Replacement Tubes 26	Mitre Saw Blades 184	Polyethylene: Food Grade 89
Heatworker Kiln 138	LaserCAM Servicing 230	Mobile Ware Stillage Trolley 137	Polypropylene Sheets 29
Hegner Fretsaw Workstation 153	Lathes: CNC 75, 77-78	Model Bases 62	Postage 2
Hegner Fretsaws 152-153	Lathes: Metal 166-167	Modela MDX-50E 69	Poster Paper 42
Hex Keys 197	Lathes: Wood 156-157	Modela Pro II MDX-540E 70-71	Potter's Wheels 135-136
Hexagonal Workbenches 208	Leather Cases 127	Modelling Board 90	Pottery Cupboards 137
High/Low Tack Tape 48	LED Boards 115	Modelling Foam 90	Pottery Equipment 134-140
HME Heat Treatment 174-175	LEDs 114-115	Modelling Plastic 90	Pottery Kilns 138-140
Hole Punch & Eyelets 194	Lervad Cupboards 137, 211, 216-217	Modelling Stand 135	Pottery Storage 137
Hoodies 116	Lervad Pottery Cupboards 137	Modelling Wax 91	Power Boards 114
Horizontal Pugmill 134	Lervad Tool Cupboards 216-217	Mojo 3D Printer 58-59	Power Feed Horizontal Pugmill 134
Horizontal Storage Racking 220	Lervad Workbenches 210-211	Mojo Materials 62	Power Tools 202-204
Hot Wire Sculptor 181	Levels 201	Money Boxes 127	PR-1050X 104-105
Hot Wire Strip Heaters 176, 180	Light Boxes: Artwork 132	Morticers 141	PR-670E 104-105
Identity 221-226	Light Boxes: UV Exposure 97	Moulding Benches 173, 175	Preciosa Crystals 111
Image Transfer 118-129	Lightmaster Kiln 139	Mouse Mats 126, 128	Precious Metal Clay 130-131
Image Transfer Workstation 206	LightPad Lightbox 132	MPX-95 129	Presses: Fabric 113
iModela Tools 79	LIT 118-119	Mug Press 123	Presses: Heat 122-123
Impact Engraving 129	LIT and Sublimation Packs 119	Mugs for LIT 126	Presses: Plastics 183
Index 234-236	LIT Materials 124-125	Mugs for Sublimation 127	Presses: Printing 132
Industrial Racking 220	LIT Packs 119	Multicut Fretsaws 152-153	Presses: Vacuum 154-155
Injection Moulder 181	LIT Transfer Papers 124-125	Multi-Functional Swing Press 122	Pricing Information 2
Injection Moulding Consumables 185	Locktronics 92	New Builds 10-11	Primary School Software 16-17
Injection Moulds 185	Low Melting Point Alloy 171	Non Fabric Transfer Paper 125	Print and Cut Machines 36-39
Ink Cartridges: LIT Printers 128	Low Temperature Casting 171	Nortek Cantilever Workstations 214	Print Down Cabinets 132
Ink Cartridges: Print and Cut 49	LT1 Low Temperature Casting 171	Nortek Computer Workstations 215	Print Press 132
Ink Cartridges: Sublimation Printers 128	Machine Comparison: 3D Printers 52	Nortek Special Needs Workstation 214	Printable Magnetic Material 47
Innov-is 15 108	Machine Comparison: Knife Cutters 32	Nortek Workbenches 208-209	Printable Paper 42
Innov-is 27SE 108	Machine Comparison: Laser Cutters 23	Numatic Extractors 190	Printable Vinyl 42
Innov-is 35 108	Machine Comparison: Milling 64	OKI C612N A4 Printer 119	Printed Circuit Boards 14-15
Innov-is 55FE 108	Machine Stands 207	OKI C7411WT White A4 Printer 119	Printer Cartridges 49, 128
Innov-is F440E 106	Machine Workstations 207	OKI C8432WT White A4 Printer 119	Printers: 3D 52-59
Innov-is F480 107	Madeira Embroidery Threads 111	Opti SAR 1000 Sheet Metal Worker 169	Printers: Laser Image Transfer 119
Innov-is NV2600 107	Magnetic Material 47	Optimum Drills 158	Printers: Sublimation 121
Innov-is NV800E 106	Mains Switching Unit 91	Optimum Metal Lathes 166-167	Printing Press 132
Innov-is V3 106	Maintenance and Training 230	Optimum Milling/Drilling 168-169	Pro-Edge Sharpener 157
Innov-is V5 107	MakerBot Materials 61	Optimum Metal Bandsaws 165	Profile Router 177, 179
Inset (Training) Packs 228	MakerBot Replicator Mini+ 56	Oven 200FD 182	Product Showcase 0-1
Installation and Commissioning 11	MakerBot Replicator+ 56	Overlocker 109	Project Management Services 10-11
Interfacings 112	MakerBox Replicator Z18 56	Paint Brushes 196	Projects 229, 237

Index

Punches.....	194	Sewing Machines.....	107-108	Sublimation Packs.....	121	Tweezers.....	45, 48, 194
Pugmills.....	134	Sewing Materials.....	110-117	Sublimation Products.....	127-128	Ultimaker 2 Extended+ 3D Printer.....	55
R25 Schredder.....	183	SG-300, SG-540.....	38-39	Sublimation Printers.....	121	Ultimaker 2+ 3D Printer.....	55
R30 Sheet Press.....	183	Sharpeners.....	157, 198	Sublimation Printing Shirts.....	117	Ultimaker 3 3D Printer.....	55
Racking.....	219-220	Sheet Material Storage Racks.....	219	Sublimation Transfer Papers.....	125	Ultimaker 3 Extended 3D Printer.....	55
Raspberry Pi.....	96	Sheet Metal Workers.....	169-170	Support Removal Systems.....	59	Ultimaker Materials.....	61
Recycling - Plastic.....	183	Sheet Press.....	183	SV-8E, 12E, 15E.....	33	Universal Adhesive Remover.....	48
Removable Vinyl.....	41	Shelving.....	219	Sweatshirts.....	116	uPrint Materials.....	62
Removal Systems.....	59	Shirts.....	116-117	Swing Presses.....	122-123	uPrint SE 3D Printer.....	58-59
Resin.....	57	Showcase of Products.....	0-1	Switch Box.....	91, 190	uPrint SE Plus 3D Printer.....	58-59
Riveter.....	196	Side Benches.....	211	Switches.....	115	UV Exposure Light Boxes.....	97
RJH Finishing Bandfacers.....	163	Sieg CNC Lathe.....	75	Swordfish Fretsaw.....	151	Vacuum Form Trimmers.....	177, 179
RJH Finishing Drills.....	159	Sieg CNC Lathe Tools.....	85	T Shirts.....	117	Vacuum Formers.....	176-179
RJH Finishing Fretsaw.....	151	Sieg CNC Mill.....	74	Table Easels.....	133	Vacuum Forming Service Kits.....	185
RJH Finishing Gerbil.....	177	Sieg CNC Mill Tools.....	85	Tables.....	213	Vacuum Forming Sheets.....	185
RJH Finishing Gerbil Accessories.....	185	Signage.....	221-226	Tap & Die Set.....	197	Vacuum Presses.....	154-155
RJH Finishing Grinders.....	162	Signwriting Vinyl.....	40-42	Tape: Heat.....	125	VAT.....	2
RJH Finishing Polishers.....	164	Silver Jewellery.....	129-131	Tape: Knife Cutting.....	48	VCarve Software.....	22
RJH Finishing Tool Sharpener.....	161	Silver Reed Knitting Machines.....	101	Tape: Milling.....	87	VCarving Board.....	89
Robert Sorby Sharpening System.....	157	Single Etch Tank.....	99	Tape Measures.....	201	Vee Block & Clamp Set.....	200
Robert Sorby Wood Turning Tools.....	157	Single Mug Press.....	123	TechSoft Enterprise.....	221-226	Veneer: Flexible.....	29
Robox.....	53	SK830 Knitting Machine.....	101	TechSoft Textiles.....	100-117	Veneers.....	155
Robox Materials.....	60	SK840 Knitting Machine.....	101	TechSoft Workstations.....	205-207	VersaSTUDIO BN-20.....	36-37
RoboxDual.....	53	Slab Roller.....	135	Teddy Bears.....	126, 128	VersaSTUDIO Cleaning Kits.....	48
RoboxPro.....	53	Snap-off Knives.....	195	Teflon Sheets.....	124	Vertical Panel Saws.....	150
Roland ARM-10.....	57	Snips.....	194	Terms of Trading.....	233	Vertical Panel Saws: Blades.....	184
Roland CAMM 1 GS-24E, GR Series.....	34-35	Socket Sets.....	196	Test Kiln.....	140	Vertical Pugmill.....	134
Roland EXG-350E.....	68	Soft Toys.....	126, 128	Textiles.....	100-117	Vertical Storage Racks.....	220
Roland MDX-40AE.....	66-67	Software: 2D Design.....	12-13	Textiles Overview.....	100	VG-540, VG-640.....	38-39
Roland MDX-50E.....	69	Software: 2D PCB.....	14-15	TH3309D Metal Lathe.....	167	Vice: Machine.....	71, 85
Roland MDX-540E.....	70-71	Software: 2D Primary.....	16-17	TH3610D Metal Lathe.....	167	Vice: Self Centering.....	67, 71, 91
Roland Metaza MPX-95.....	129	Software: 3D Design.....	18-20	TH4010D Metal Lathe.....	167	Vilene Bondaweb.....	112
Roland Modela MDX-50E.....	69	Software: 3D Manufacture.....	21	Thermoforming Centre.....	179	Vilene S133.....	112
Roland Modela Pro II MDX-540E.....	70-71	Software: Embroidery.....	102-103	Thermoforming Equipment.....	176-183	Vilene S80.....	112
Roland RotoCAMM MDX-40AE.....	66-67	Software: Knitting.....	101	Threads.....	110-111	Vinyl: Coloured.....	40
Roland SRM-20E.....	65	Software: VCarving.....	22	Tiger 2500.....	161	Vinyl: Frosted.....	41
Roland Stika SV-8E/12E/15E.....	33	Solder Fume Extraction Unit.....	191	Tip Extraction Kit.....	98	Vinyl: Glitter & Sequin.....	41
Roland TrueVIS SG & VG Series.....	38-39	Solder Fume Trunking.....	98	TMT C612N A4 Printer.....	119	Vinyl: Glitter Heat Applied.....	45
Roland VersaSTUDIO BN-20.....	36-37	Soldering Irons.....	98	TMT C741 1WT White A4 Printer.....	119	Vinyl: Heat Applied.....	44
Roller Shutter Cabinets.....	137, 216-217	SolidWorks.....	18-20	TMT C8432WT White A4 Printer.....	119	Vinyl: Heat Applied Printable.....	45
Roll-Up Banner Material.....	46	SolidWorks Training.....	232	Tool Cupboards.....	216-217	Vinyl: Metallic Special Effect.....	41
Roll-Up Banner Stands.....	46	Soluble Stabiliser.....	112	Tool Racks.....	217	Vinyl: Peelable Printable.....	42
Rotary Engraving Laminates.....	88	Spanners.....	196	Tool Sharpeners.....	157, 161	Vinyl: Printable.....	42
Rota-Spray.....	99	Special Effect Vinyl.....	41	Tools: Cupboards.....	216-219	Vinyl: Removable.....	41
Rotatrim Trimmers.....	133	Special Needs PECT Workstation.....	214	Tools: EGX-300E.....	86	Vinyl: Transparent.....	41
RotoCAMM MDX-40AE.....	66-67	Special Needs Potter's Wheel.....	136	Tools: EGX-350E.....	86	Vinyl Application Equipment.....	48
Rotondi Iron.....	113	Speciality Embroidery Threads.....	110	Tools: Hand.....	192-202	Vinyl Clip.....	48
Rotondi Ironing Table.....	113	Spraybooth: Wet Back.....	140	Tools: iModela.....	79	Visual Toolpath.....	21
RouterCAM.....	72-73	Spring Dividers.....	200	Tools: MDX-40AE.....	81	Wall Extruder.....	134
RouterCAM Tools.....	84-85	Square: Combination.....	201	Tools: MDX-50E.....	82	Wallpaper.....	46
Routing Machine Comparison.....	64	Square: Engineers.....	199	Tools: MDX-540E.....	83	Washout Booth.....	132
Routers: CNC.....	64-78	Square: Mitre.....	201	Tools: Multi Function.....	202	Water Bottles.....	127
Routers: Hand.....	202	Square: Tri.....	201	Tools: PNC-2300, 2300A.....	86	Water Release Transfer Paper.....	43
Rubber Cases and Pouches.....	126, 127	Square Workbenches.....	209-210	Tools: Power.....	202-204	Wavewash 55.....	59
Rulers.....	48, 199	Squeegees.....	45, 48	Tools: RouterCAM.....	84-85	Wax.....	91
S131GH Metal Bandsaw.....	165	SRM-20E.....	65	Tools: Sieg CNC Lathe.....	85	Wedging Bench.....	135
S400PE Bandsaw.....	142-143	SRM-20E Tools.....	80	Tools: Sieg CNC Mill.....	85	Weeding Tweezers.....	48
S45NE Bandsaw.....	142-143	Stabilisers.....	112	Tools: SRM-20E.....	80	Welding Benches.....	173, 175
Safety Rulers.....	48	Staffordshire Potter's Wheel.....	136	Tools: TS-30E.....	86	Wetback Spraybooth.....	140
Sales Staff.....	5	Stands.....	153, 206-207	Tools: Wood Turning.....	157	Wheeled Stand/Cupboard.....	206
Sample Pack: Stabilisers, etc.....	112	Standing Kick Wheel.....	135	Topworker Kilns.....	140	Whetstone.....	198
Sanders.....	204	Stanley Adjustable Wrench.....	196	Torx Keys.....	197	Wire Bender.....	50
Sawgrass Printers.....	121	Stanley Aviation Snips.....	194	Training Course Booklets.....	231, 237	Wire Brushes.....	198
Saws: Circular.....	144-145	Stanley Hand Drill.....	196	Training Courses.....	231-232	Wire Strippers.....	194
Saws: Hand.....	203	Stanley Knives.....	195	Training Packs.....	228	Witbox 2 3D Printer.....	54
Saws: Mitre.....	151	Stanley Pliers.....	194	Transfer Papers: LIT.....	124-125	Witbox Materials.....	54
Saws: Vertical Panel.....	150	Stanley Socket Sets.....	196	Transfer Papers: Sublimation.....	125	Wood Lathes.....	156-157
SC1E, SC2E Circular Saws.....	144-145	Stanley Spanner Sets.....	196	Transfers: Ceramicon.....	43	Wood Turning Tools.....	157
SCA-1200HDT Support Removal.....	59	Stanley Steel Riveter.....	196	Transfers: Water Release Paper.....	43	Woodpecker Drills.....	159
Scheppach Chisa Morticer.....	141	Stanley Wire Strippers.....	194	Transparent Vinyl.....	41	Workbenches: Hexagonal.....	208
Scheppach Tiger 2500.....	161	Staplers.....	196	Trap: Clay.....	135	Workbenches: Rectangular.....	209, 211
Scissors.....	195	Steel Cupboards.....	218	Trend Routers.....	202	Workbenches: Square.....	209-210
SCM Bandsaws.....	142-143	Steel: Mild.....	31	Tri Etch Tank.....	99	Workshop Extractors.....	186-191
SCM Circular Saws.....	144-145	Steel Rulers.....	199	Trimmers: Paper.....	133	Workshop Service.....	230
SCM Combination Machines.....	146-147	Stika SV-8E/12E/15E.....	33	Trimmers: Vac Form.....	177, 179	Workstations.....	205-207, 214-215
Scrapers.....	197	Stillage Trolley.....	137	Trolley - Stillage.....	137	Workstations: Benches.....	208-211
Screen Printing.....	132	Stitch and Tear.....	112	TrueVIS Enterprise Packs.....	226	Workstations: CAD/CAM.....	205-206
Screen Washout Booth.....	132	Stools.....	212	TrueVIS SG and VG Series.....	38-39	Workstations: Cantilever.....	214
Screw Pitch Gauge.....	199	Storage.....	216-220	Trunking.....	98	Workstations: Computer.....	215
Screwdrivers: Manual.....	196	Storage Racks.....	219-220	TS100 Extractor for Circular Saws.....	187	Workstations: Machines.....	207
Screwdrivers: Electric.....	203	Stratasys Materials.....	62	TS101 Mobile Extractor.....	188	Workstations: Special Needs.....	214
Sculptor 280 Hot Wire Cutter.....	181	Stratasys 3D Printers.....	58-59	TS101 Underbench Extractor.....	188	Wrench.....	196
Seating.....	212	Striebig Vertical Panel Saw.....	150	TS102 Extractor for Bandsaws.....	187	Zeus Book.....	200
Sedgwick Morticer.....	141	Strip Heaters.....	176, 180	TS105 Extractor for Planer / Lathes.....	188		
Self-Adhesive Stabiliser.....	112	Strip Heaters: Consumables.....	185	TS-30E Tools.....	86		
Self-Centering Vice.....	91	Student Business Enterprise.....	221-226	T-Shirts.....	117		
Servicing.....	230	Studio Easels.....	133	TU2304V Metal Lathe.....	166		
Sequin Vinyl.....	41	Sublimation.....	120-121	TU2406V Metal Lathe.....	166		
Service Kits: Vacuum Forming.....	185	Sublimation and LIT Packs.....	119	Turn Tables.....	135		
Sewable Buzzer.....	114	Sublimation Enterprise Packs.....	222	Turning Tools.....	157, 197		
Sewing Accessories.....	110-117	Sublimation Materials.....	125-128	Turret Mills.....	169		

Free Online Resources

Register online at www.techsoft.co.uk
for access to free resources

Includes:

Designs to Inspire and Make -
Sample Files (see page 229)

Downloadable
Software Updates



2D
DESIGN

2D
PCB

2D
PRIMARY

Training Course Booklets with
Drawing Files (see page 231)

TechSoft Machine
Printer Drivers



And lots more to come....

CAD/CAM

**Software ~ Laser Cutting ~ Plasma Cutting ~ Knife Cutting
Print and Cut ~ 3D Printers ~ CNC Milling / Routing / Engraving
CNC Lathe ~ Image Transfer ~ Computerised Embroidery**

ELECTRONICS

Software ~ Electronic Control & Coding ~ PCB Manufacture

TEXTILES

**Software ~ Embroidery Machines ~ Sewing Machines ~ Knife Cutters
Laser Cutters ~ Sublimation ~ Knitting Machines
E Textiles ~ Clothing and Accessories**

ART, DESIGN AND CERAMICS

Precious Metal Clay ~ 3D Pen ~ Screen Printing ~ Pottery Kilns

WORKSHOP EQUIPMENT AND INSTALLATIONS

**Woodworking Machinery ~ Metalworking Machinery ~ Heat Treatment
Thermoforming ~ Vacuum Pressing ~ Extraction Systems
Full Design & Installation Service**

FURNITURE

**CAD/CAM Workstations ~ Technology Workbenches ~ Desks and Chairs
Cupboards and Shelving**

RESOURCES AND CPD TRAINING

Various CAD/CAM ~ Training Courses

**TechSoft UK Ltd.
Falcon House
Royal Welch Avenue
Bodelwyddan
Denbighshire
LL18 5TQ**

**Tel: +44 (0) 1745 535007
Fax: +44 (0) 1745 535008
www.techsoft.co.uk
sales@techsoft.co.uk**