MAGI-CUT

POWERFUL CUTTING OPTIMISATION
SOFTWARE FOR SAWS & ROUTERS

12

Proven worldwide

Magi-Cut is the world's leading dedicated panel optimisation and nesting software. Thousands of companies in more than 80 countries already use our software to transform their design, cutting and finishing performance. It enables you to manufacture economically with the most efficient processing of sheet materials.

Whether you use a table saw, a beam saw, router, machining centre or all of these, Magi-Cut can help you save material and time, and give you a competitive edge, with the most advanced, flexible and comprehensive optimisation and production software on the market.

Perfectly integrated

Magi-Cut is ideal for most panel processing applications including kitchen cabinets, furniture for bedrooms, bathrooms and offices, shop fitting, caravans, boats, entry doors, washroom cubicles, sheet plastics, metals, and much more.

Magi-Cut lets you control the whole manufacturing process with just one software suite. This integrated approach means you only need to enter original data once, so you can move swiftly from drawings to quotation to optimisation, then directly to machine programming and control, and ultimately to your customer.

Tailored reporting

You can respond faster to customer queries, since Magi-Cut software provides all the information you need for any job, in a fraction of the time you would otherwise spend on manual calculations. Reporting options can be configured to your requirements and all the results clearly portrayed. Key figures are instantly available.

Staying in control of costs and production schedules is easier too, since Magi-Cut gives you quick answers to critical issues. These include identifying the best sheet sizes to purchase, whether you can use existing offcuts, what will the sheet material, edge banding and hardware cost, and how long will it take to cut, edge and machine the job?

At the heart of Magi-Cut is its powerful cutting optimisation engine which has been developed and fine-tuned over the past 40 years and is enhanced by additional features for every part of your manufacturing operation.

Add modules and seats as you go

Above and beyond the features already included as standard, a number of add-on modules allow you to enhance the scope of Magi-Cut still further. On top of this, you can increase the number of licenses.

Magi-Cut offer solutions for large scale manufacturers where high volume sheet cutting and complex cutting lists are processed with industrial highly automated CNC controlled plants, but equally there are versions for smaller workshops with manual machinery.

Customer Focused Business

Our business has always been focused on the needs of our customers, developing woodworking software that is useful, easy to use, is available at an affordable price and provides an excellent Return on Investment.

Existing users have access to a remote support system so they can get answers to queries as quickly as possible. Software upgrades are rolled out in a user-friendly way ensuring no loss of data or cutting lists.

Saw? Nesting? Both? No problem!

Magi-Cut gives you the flexibility to choose, because it is able to supply both cutting systems with data concurrently. Magi-Cut recognises from the parts lists which machine you want to use and generates the appropriate data. You can create the contour elements for each part as MPR file (e.g. with woodWOP), use DXF data, or program them directly in Magi-Cut. If only rectangular parts are to be cut on a saw or CNC machine, a simple parts list without individual part programs is sufficient

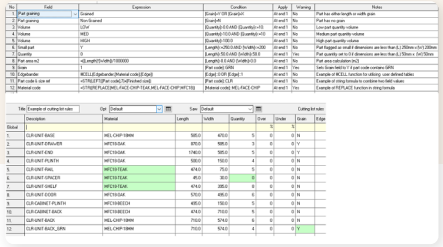
Industry-standard software

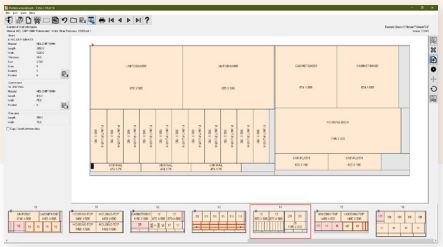
Clearly structured and easy to use – that's Magi-Cut's formula for your success. Another great benefit is that you can automate many steps, thus reducing manual operation to a minimum.

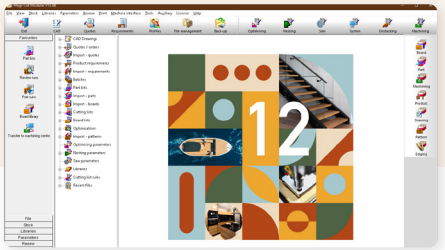
Magi-Cut is compatible with all common industry solutions. Parts list tables in PTX, CSV or XLS(X) format can be transferred with all information at the touch of a button. You set the standards for your cutting process, not the software! Detailed parameter settings allow you to align the optimisation results to your specific manufacturing process. All configuration options are graphically visualised and so easy to find and use. An intelligent, user-friendly Help system also provides support.

Top features for your manufacturing process

We support you with a team of developers and support technicians to ensure that Magi-Cut puts you one step ahead. Our update and support contracts give you access to all the latest features.







Rules editor for cutting lists

This editor allows you to define rules for data handling and for automatic generation of data specifically to suit your manufacturing process. Key figures can then be calculated fully automatically in an instant

Graphical cutting pattern editor

No need to start again from the beginning if there is a change to the parts list, or if you want to cut an optimised pattern differently. With Magi-Cut you simply grab the mouse and enter the changes directly in the cutting pattern in a matter of seconds.

Grain matching

Templates define the position of parts in the cutting pattern – either in order to achieve a uniform veneer pattern or to group narrow parts before edging.

User-friendliness is key

Magi-Cut has always had an outstanding reputation for ease of use. It features a modern interface, countless input aids and options for automating important processes.

Calculating materials and machine costs

A big advantage when preparing quotations: Magi-Cut immediately indicates the material costs and calculates the machining time. You are able to calculate orders accurately and benefit from easier production planning.

Integrated materials database

Here you can set up data for all your sheet materials, enter panel usage and register offcuts so that they can be used later. Connection to horizontal storage systems is easy, with the Stock Control module.

Fast algorithms

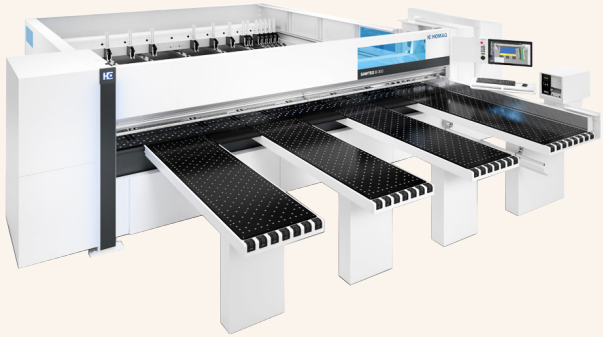
Magi-Cut's calculating engine uses all your computer's processors. This increases the number of computer operations, achieving best results very quickly.

User profiles

You can create a profile for each user – with password, paths, access rights and much more. Users immediately feel at home with the software and can use the functions they need.

Standard Optimiser (SO)

Specifically designed to cope easily with medium production volumes on a beam saw, this saw optimising modules allow you to confidently take on a wide range of jobs, and satisfy your customers with your ability to handle all types of contracts.



Part lists (jobs) may contain up to 10,000 pieces - mixed materials - grain/cross grain or non-grained parts - metric or imperial sizes - required and plus/over parts.

Up to 99 user-defined fields of information per part including edging material can be entered or imported directly from spreadsheets.

Cutting list rules based on user defined tables - numeric & string formulae - allows automatic cutting list adjustments ready for optimisation.

Integrated board library - holds material specifications, sheet sizes, cost, available stock, automatically records offcuts for later use.

Calculation of cutting time based on extensive saw settings and job costing summary showing full breakdown of production costs.

Grain matching - Position parts in defined templates within the cutting pattern to achieve a uniform veneer pattern.

High speed optimisation with multi-core processors; multiple jobs (up to 250) can be optimised in one batch. Minimum material cost with practical cutting plans.

Configurable summaries, allowing choice of columns, fonts, subtotals with option for graphs and bar charts for management reporting.

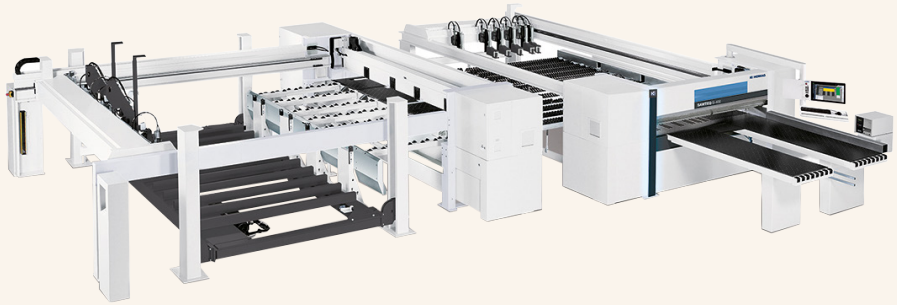
Extensive optimising and saw parameters with integrated help allows precise control of cutting patterns and these may be overridden by material specific settings.

Reports include management summary, material usage, cutting time, offcuts, costs, parts produced, waste% by pattern, weights.

Pattern display - thumbnail preview show material texture or colour coding for recut parts and offcuts.

Professional Optimiser (PO)

Designed for industrial high-volume production where maximum throughput is the key, with control of off-stacking and cutting time. It can handle the needs of angular saw systems.



The PO module handles up to 20,000 lines (part types) per optimisation, and up to 99999 pieces per line.

Advanced parameters allow for parts to be assigned priority, and to limit the number of different board sizes used.

The optimisation is cost based and balances the increase in average cutting height and faster cutting time with the raw material used.

Free cut analysis - determines the optimum position to cut a jumbo board into two sizes subject to maximum specified length.

Parts can be grouped and a limit placed on the maximum number of pallet groups that can be open at one time.

Extensive recut parameters allow you to minimise waste and provide additional processing with supported saws/hardware.

Mixed material stacks feature allows patterns that can be repeated in multiple materials (e.g laminates) to be used and sorted to the start of the run.

Additional extended recut, head cut and board combinations can be enabled and considered by the optimiser to further minimise waste.

Optimising for a nesting machine or router (NE)

Designed to improve your yields when routing parts (rectangular or shaped) on a nesting machine this advanced module also finds ways to improve the speed of cutting with the powerful sequencing and stay down techniques. Even better, your drilling, pocketing and grooving requirements can be included in the programs.

Nesting software considerations include board margins, part separation, shape rotation, offcut criteria, waste cuts and small part placement.

Parts that need to be grain matched can be defined as a set using a template which is created using the machining editor.

The nested pattern editor allows last minute changes to pattern quantity and the ability to add further parts or new patterns.

Tabs - the nesting optimiser can automatically leave tabs around small parts.

Small parts are placed away from the edge and towards the middle of the sheet.

Where applicable horizontal machining and instructions for the back will be separated out and sent to an alternate specified path.

NE will determine the most efficient sequence for routing the nested pattern with minimum tool changes, and can process small parts first.

Common edge routing - edges of adjacent parts can be routed at the same time (when separated by the tool diameter).

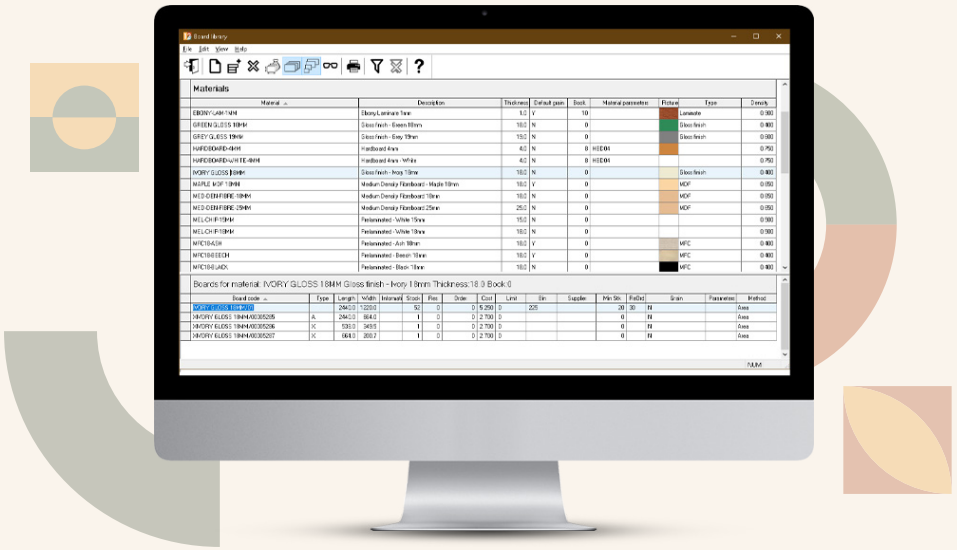
The rectangular nesting optimiser will determine the best size to pre-cut jumbo size boards that exceed the depth of the nesting table.

Stay down routing - parts on a pattern are routed in a continuous operation extending tool life and saving cutting time.

Stock Control (SC)

For accurate and efficient inventory management

This invaluable module protects your profit margin by minimising downtime caused by lack of stock. How? By helping you accurately track your raw materials and by adding offcuts back to stock. This ensures no reusable material is wasted, so you systematically increase material yield. Panels can be allocated to jobs in advance so that you do not optimise the same offcut on different jobs.



Features and benefits

This module helps you check stock levels, record raw material orders and book in receipts from your suppliers.

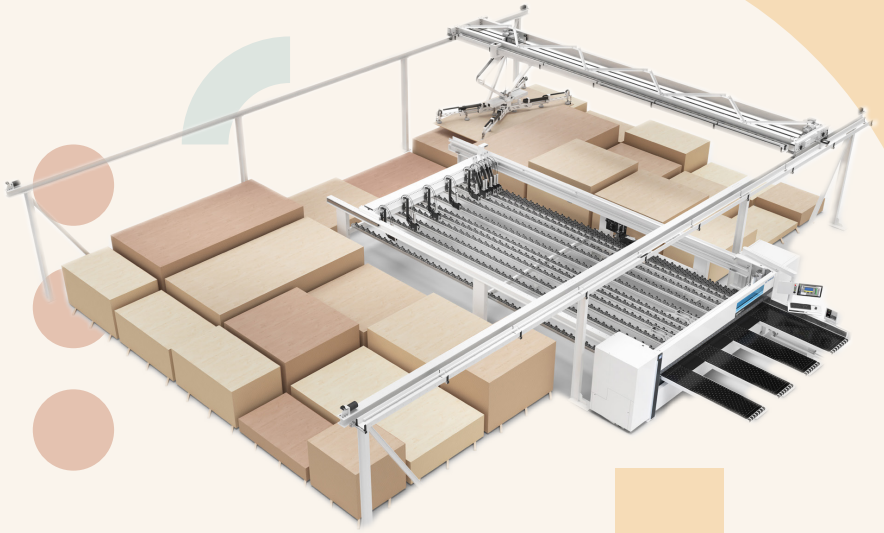
Configurable reports include stock valuation, minimum stock levels, monthly summary of stock usage and an audit trail of all stock movements.

It automatically updates both core materials and laminate stock when you laminate complete panels prior to cutting.

Interface to automatic storage handling systems for synchronisation of panel and offcut stock via SQL Server database.

It considers available free stock (physical stock less allocations) and automatically adjusts stock after cutting.

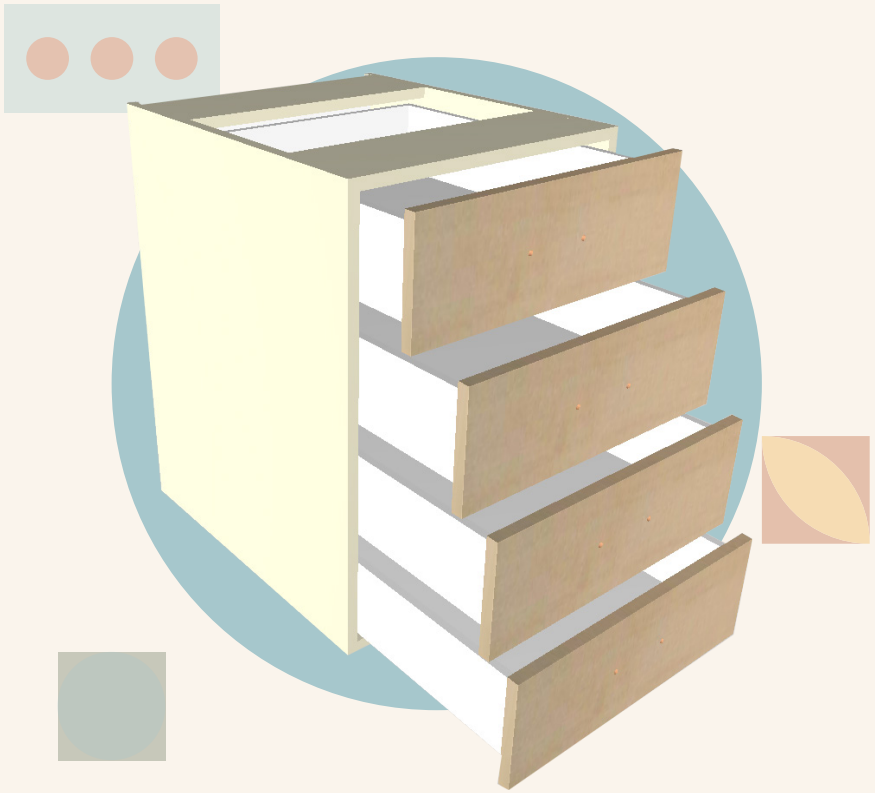
Physical stock control of fittings and edge banding material – only when used in conjunction with the add-on module Products and Quotes



Products And Quotes (PQ)

For fast response to enquiries and orders

This module helps you create quotations and process orders quickly and easily. The parametric product library allows Magi-Cut to detail every order, including all standard or custom products, parts, hardware and operations. You will only need to enter your data once to produce order acknowledgements, despatch notes, invoices and a complete calculation of all costs.



Features and benefits

If you use a production cell, all the edging data can be transferred to the edge bander by bar code.

User-defined product ‘variables’ take account of order-based requirements such as material colour and thickness, and hardware options.

Use of formulae and user-defined tables enables automatic calculation of component sizes for special cabinets, and allows parametric pricing.

You can attach image files (BMP, EMF ...) or use Magi-Cut’s own drawing library to add drawings to your product catalogue

Flexible form designer allows tailor-made documents to include company logo, graphics and bar codes with full control of font and positioning.

Customer database with full contact details, invoicing address, multiple delivery addresses, discounts and free format notes fields.

Products can be visualised in 3D and included on forms and labels.

Parts library and label printing

For better management and tracking of parts

This feature helps you gear up for production faster by instantly generating data for all your most frequently used parts. Simply by using just the part codes to pull items into a parts list, you can enter cutting lists quickly and accurately and create factory route cards at the press of a button, speeding up production.

Features and benefits

The part library can hold details of size, material, grain and edging, as well as plenty of user-defined information for each part.

You can generate detailed labels with multiple bar codes and graphics – for fast setup of CNC machines equipped with bar code scanners.

The library can also hold a list of regularly used hardware components with their costs.

The part dimensions and other fields may be parametric and specified at order entry if required.

Labels can be printed in the office in the sequence of cutting or directly at the machine.

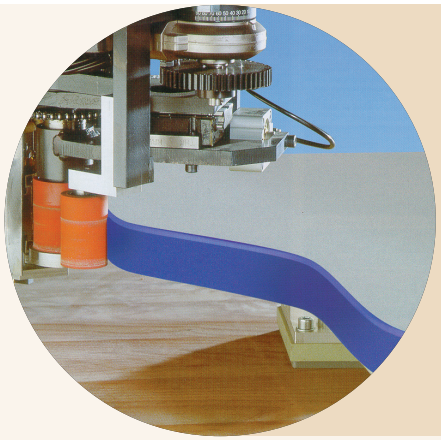
A list of operation times can be held for each part and be used to build up a full part cost.

Parts can be visualised in 3D and included on forms and labels.

Edging and laminate calculations

Provides precise calculation of edging and laminate requirements

This feature processes all part measurements in a single step, making your planning a lot easier. Taking the edging into account, it corrects the cut sizes and calculates the sizes and amounts of laminate and edging material required. The graphic corner joint information on the label ensures that edging is applied correctly.



Features and benefits

The edging library holds description, thickness and cost of all edging and laminating materials.

The edging summary lists the running metres of edging required and the costs of all the materials.

If you use a production cell, all the edging data can be transferred to the edge bander by bar code.

You get precise details of processing times and costs for single or double-sided edge banders.

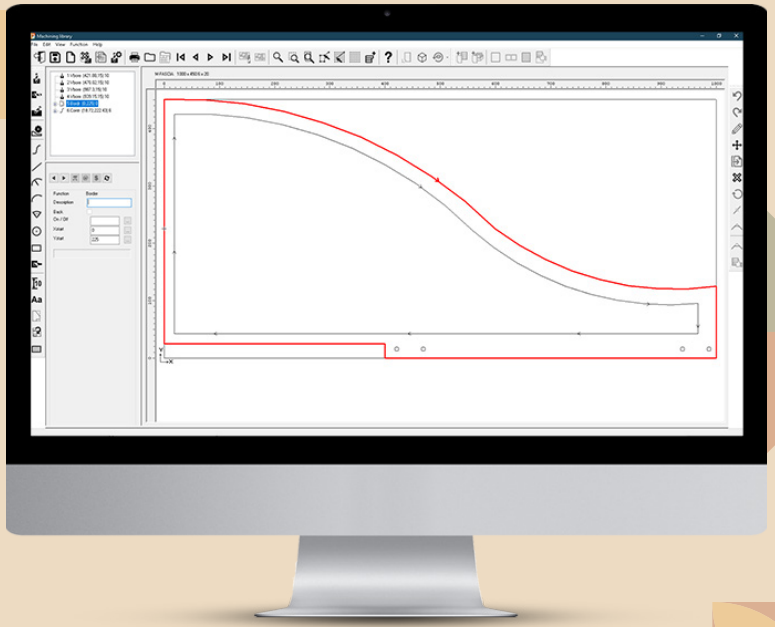
Laminate size calculations can include allowances and special calculations for post-formed edges.

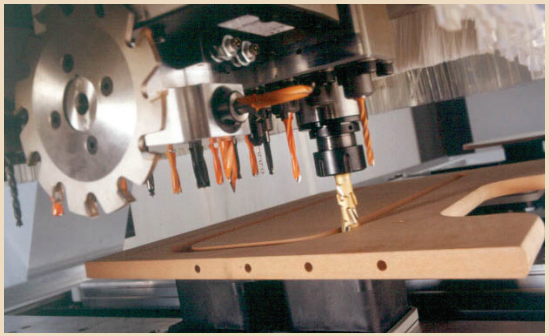
The corner joint information provides details of how the corners of parts are be treated, for example, mitred, overlapped or rounded.

CNC Processing and linking

Fast setup of your CNC machines

Use this top feature to streamline your production into a seamless, highly efficient and accurate process. It creates a fully integrated manufacturing cell by downloading part drawings directly to your point-to-point machining centre. Parts are labelled at the saw. The label includes a bar code for the drawing reference. Scanning at the machining centre provides a fool-proof and fast process that ensures each part is machined correctly.





Features and benefits

The geometry for rectangular or shaped parts can be drawn quickly using the editor, or can be imported from DXF files.

The machining library holds parametric drawings so that, as the part size changes, the machining instructions are recalculated instantly.

This top feature offers support for drilling, grooving, contour routing, operations on both sides of part, vacuum pod positions, dimension lines and pockets.

The machining interface allows direct transfer of data to most CNC-controlled machining centres via DXF and proprietary formats.

Details of depths and tooling information can be added for each operation, including tool speeds, tool path compensation and other tool-specific data.

If used alongside woodWOP, all MPR programs can be used and data from them transferred to the CNC machine.

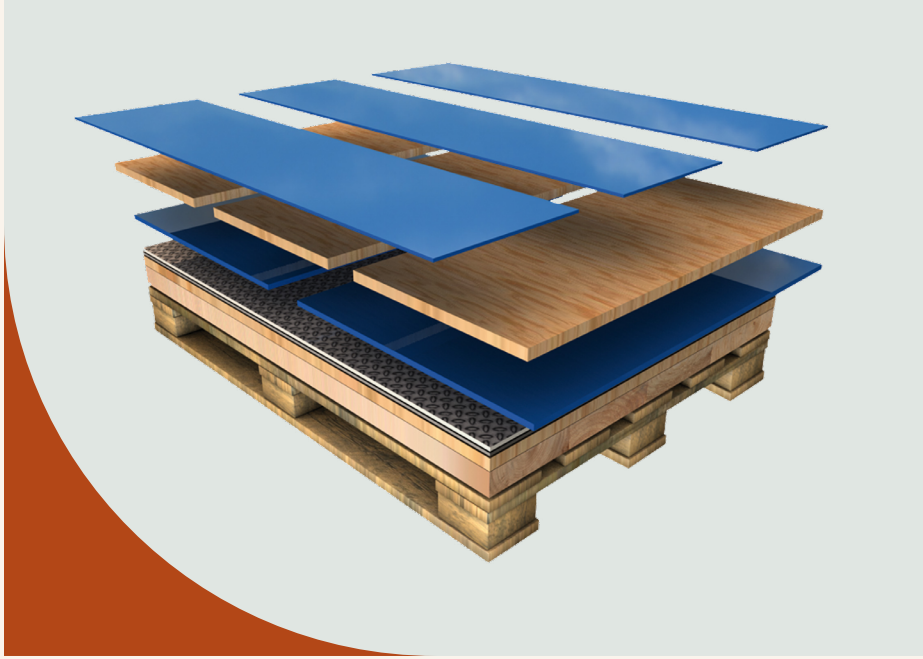
Machining times can be estimated for each part.

Labels or route sheets can include the part drawing.

Destacking

For efficiency and fast throughput

The top feature “destacking” rationalises throughput at the saw by planning the destacking process and thus keeps production running smoothly. It gives you a list of pallet requirements or a baseboard cutting list and, based on the size of your mechanised destacking stations, will limit the number of open parts. This ensures that finished items go to the assembly department as quickly as possible.



Features and benefits

A station report provides information for conveying parts to the correct pallets or baseboards in the destacking area.

The layout of parts on each pallet or baseboard can be downloaded to automatic destacking of equipment.

Magi-Cut Professional includes an advanced optimising algorithm which obeys maximum station sizes when allocating parts to stations.

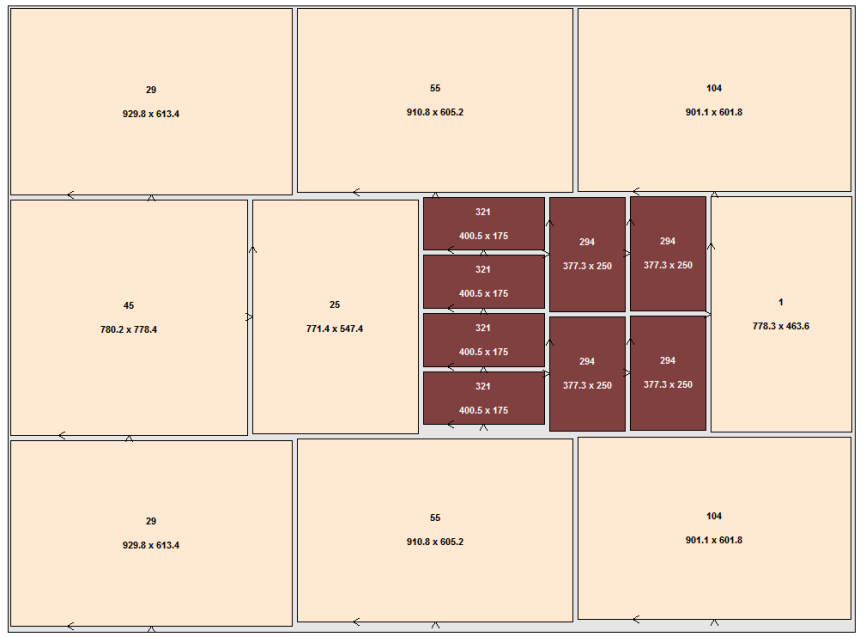
A cutting list for baseboards is calculated from the part sizes allowing for oversize allowance, layout constraints and maximum stacking height.

A destacking summary shows the operator, pattern by pattern, on which pallet each part must be placed.

Labels can be printed for stacks or pallets.

What's new in Version 12

The latest release includes a more modern look, offers the option for cloud licencing, and a host of new features across the package.



Modern style

Modern line style icons throughout with option for high-contrast icons

Label exports

Labels and forms can now be exported as image file formats (BMP, JPG, PNG & EMF).

Drawing imports

Machining drawings from different sources can be mixed in the same part/cutting list (ie. MCLIB, DXF, flat MPR) and one-time drawing edits can be made in the cutting list

Nesting

An extended nesting pass considers placing smaller parts towards the middle of the pattern as well as offset from the edges.

Nesting

Improvements to stay down routing when using shaped parts with convex arcs.

Nesting

Option to add an extra preliminary routing pass for small parts and stay down routing

The Cloud

Cloud licensing of software with internet connection – no need for USB dongle

woodStore view

A new option to show for each board the stock per bin number

Beam saw optimisation

New parameter to encourage fuller books and fewer cutting cycles without over production

Cutting pattern display/print

New option to show for each part the sides that are edged and sides that still need to be done.

Loading summary

Machine (Router) Loading Summary for nested jobs showing boards required in cutting pattern order

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Features list

Parts list

Metric or imperial (inch) dimensions
Grain lengthwise / crosswise / none
Exact quantities or over/under production
Maximum of 20000 parts per parts list
Unlimited number of materials per list
Configurable information boxes
Configurable part list view
Part library for regular parts
Machining drawing library for CNC

Imports & Exports

Import of parts lists / cutting lists from CSV or Excel XLS(X)
Import of board lists from CSV or Excel XLS(X)
Import of part drawings from DXF
Export summaries to Access mdb, CSV, Excel XLS(X)
Export summaries to PDF
Export cutting patterns to DXF

Cutting lists & edging

Configurable rules for cutting lists and board lists
Different panel dimensions and quantities per optimisation
Calculation of unprocessed panel sizes, cutting and finished sizes
Calculation of edging lengths in metres or units
Calculation of laminate sizes
Graphic display of edging sequence
Calculation of processing time for edging
Determination of quantities and sizes of laminate
Calculation of costs for edging and laminate
Edging and laminate library

Stock

Material library for unprocessed boards and offcuts
Automatic stock issue post optimisation
Import of stock adjustment via file

Summaries, Labels & Forms

Batch and run summaries
Parts, boards, material and cutting pattern summaries
Offcut summary
Weight calculation
Graphs and charts
Configurable reports and summaries
Form designer for parts lists and cutting patterns
Label designer for texts, bar codes and graphics
Labels for parts and offcuts

Cutting patterns

Graphic cutting pattern preview
Cutting pattern display with colour palette or material grain
Cutting pattern editor – manual amendment of cutting patterns
Cutting pattern and template library

Other functions

File management - copying & deleting data
Backup & recovery
Link to websites / display of available updates
Integrated local help & online video guides
User profiles
Stand-alone batch operation (for external calls)

Transfer to Saw

Calculation of cutting time
Cutting instructions for saw operator
Interface – single saws
Interface – angular saw units / multiple saw systems
Interface – CNC machines
Transfer parameters
Saw interface – PTX format
Stress elimination cuts
Transfer to single beam saws, split fence saws
Transfer to Homag - Cadmatic 4 / 5
Transfer to Homag - Woodwop MPR(X)
Transfer to routers and DXF
Transfer to nesting machines

Optimisation

Yield optimisation
Parameters for cutting pattern complexity
Parameters for saw blade / router and trim cuts
Maximum of 10000 parts per optimisation
Multi-core enabled for batches (up to 250 jobs)
Material and board - dependent parameters
Templates for continuous grain pattern

Standard & Professional Optimiser

Small / medium quantity optimiser
Timber/worktop cross cut optimiser
Strip sorting for auxiliary pusher

Professional Optimiser ONLY

Total costs optimisation (material and cutting)
Large quantity optimiser
Optimisation with automatic over production
Free cut optimisation
Optimisation with priorities
Settings for combiTec and HOMAG recuts unit
Settings for flexTec
Extended computing time and advanced options
Open stacks limit
De-stacking & Palletisation
Optimisation with parts groups

Nesting Optimiser ONLY

Optimisation of shaped parts
Stay down & common edge routing
Part priority settings

MAGI-CUT

St Brandon's House
29 Great George St.
Bristol
BS1 5QT

01179 276353
www.magi-cut.co.uk
sales@magi-cut.co.uk

Magi-Cut Modular V12 is supported on the following operating systems: -

Windows 11
Windows 2022 Server
Windows 2019 Server x64 Editions
Windows 2016 Server x64 Editions
Windows 10 (32bit & 64bit Editions)
Windows 2012 server R2 x64 Editions
Windows 8.1 (32bit & 64bit Editions)
Windows 2012 Server x64 Editions
Windows 8 (32bit & 64bit Editions)

For the best experience we recommend that your PC meets the following minimum specifications: -

Processor speed 2.0 Ghz
Memory 2GB (200Mb free)
Hard disk 20GB free
Display 1440 x 900 or higher
USB port

To make use of the 3D mode we recommend the PC meets the following minimum specifications: -

Processor speed 1.9Ghz
Memory 4GB
OpenGL version 3.2

To support using woodStore as the board database, the Microsoft SQL Server used to host the woodStore database must be Microsoft SQL Server 2008 or later.