Magnus
CO2 Laser

Reliable turnkey laser cutting system designed for cutting and engraving applications.

MULTICAM
Complete CNC Solutions

THE LASER CUTTING SOLUTION

MAGNUS CO2 LASER

The Magnus CO2 Laser series is the best-selling large format cutting and engraving system on the market. Boasting a host of available options, sizes, and laser powers, no other laser system is more flexible and cost effective than the Magnus CO2 laser.

Everyone “knows” that lasers do a great job cutting acrylic, and that they leave a highly polished edge in one pass, far better than those “cut” by other methods. But what is not as well known is that lasers also produce quality work on many other materials for a variety of applications. By combining the latest in laser technology and prominent engineering developments, MultiCam laser machines can engrave, kiss cut, relief engrave, and cut a wide range of metals at a significantly lower operating cost than other methods. The Magnus CO2 laser is equipped with an impressive list of standard features and a host of available options that allow just about any application to be cut or engraved.

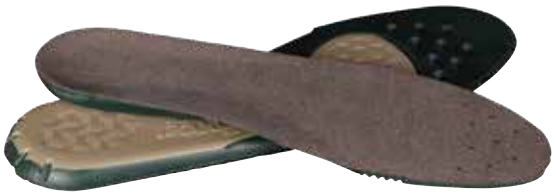
CUTTING MARKETS & MATERIALS

No laser cuts a wider variety of materials than the Magnus CO2.

Metal Cutting: When equipped with the metal cutting option, the Magnus CO2 laser can easily cut a wide range of materials up to .25”/6mm while providing a smooth edge finish to a precise tolerance.

Membrane Switch and HMI: Lasers are now the industry standard for processing membrane switch components and assemblies. When combined with the i-Laser vision alignment system, it is as easy as print and cut.

Wood: Lasers are ideal for woodworking applications including cutting of veneers for inlay work, furniture, and automotive interiors as well as cutting parquetry and die board for steel rule dies.

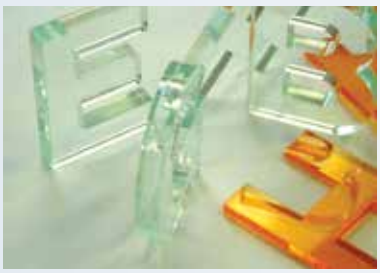


Rubber and Cushioning: Lasers can contour cut a wide range of elastomers, EVA’s, composites, and laminated show and support products.

Stencils: Lasers can cut thin films and stencils with outstanding precision, fine detail, and high speed. From polyester to stainless steel to exotic films, lasers offer a superior cut quality.

Thin Film: There is no better way to precisely cut to a material backer and selectively cut multiple layers than with a laser. Lasers are the most reliable and quick non-contact way to kiss cut.

Matboard: Matboard can easily be processed with meticulous detail and without burning edges for most material types.



Foam & Packaging:

When correctly configured, laser can cut a range of foams and packaging materials up to 4”/100mm thick.

Acrylic: Lasers can engrave complex images onto acrylic and can be used to create panels for LED light distribution.

ADVANTAGES OF A LASER

It's easy to see the benefits of using a laser versus other cutting technologies.

Save up to 40% in material cost by using lasers, giving the laser a faster payback with higher quality cuts.

- Non-contact cutting and engraving has no consumable costs for router bits, and provides cleaner edges.
- More intricate cutting and engraving is possible on a wider range of materials achieving finer detail than with any other method.
- With no tooling width, the laser is able to offer faster high density cuts which can save 40% on material usage.
- Set-up time is reduced with a laser solution.
- Lasers can cut square corners without leaving a radius common to routers.
- The laser achieves one-step operation with polished edges. No flame polishing or secondary operation is required on the cut pieces.
- Inlaid parts can be cut from the same file.
- Laser cutting does not produce chips or sawdust, offering a much cleaner operation.
- Lasers have a lower cost of operation compared to other commonly used methods.

Other options result in wasted material and more debris to be extracted.

A laser uses a much smaller kerf, resulting in material savings with virtually no debris.

LASERWORX CUTTING & ENGRAVING SOFTWARE

LaserWorx is a comprehensive and feature-rich software package for vector cutting and raster engraving. LaserWorx's advanced optimized output sends files in "True ARC" mode ensuring that the smoothest possible cuts are made without the slowdown and rough arcs found in many print driver-based laser systems. When vector files are combined with raster files, LaserWorx automatically orders the engraving and cutting for the most efficient processing of your files. If you use Corel files, then our simple-to-use "Corel Bridge" allows drag and drop flexibility without the hassle of importing. Our "True Nest" option allows for true shape nesting of your cut files to provide the best possible material utilization. With advanced features like grain control, and previously cut partial sheet utilization, "True Nest" can save you as much as 40% in material cost.

CAD/CAM Software for the Professional

Print drivers are for printers, not lasers. They limit your flexibility and capability as well as quality. High throughput and accuracy can only be achieved when the right sequence and cut order can be controlled, and print drivers just cannot provide that. LaserWorx takes complete advantage of the laser system's capabilities, giving you more in less time with higher quality. Just say no to print drivers.

Software Features:

- Offset for beam diameter
- Inside from outside sorting
- Nesting of files
- Parametric shapes tool
- Contour ordering
- Contour cut
- Clip-art viewer
- Interactive kerning
- Arrays

I-LASER VISION

Sign & Graphics companies, Fabricators, and Manufacturers are increasingly requiring the ability to align materials for cutting. The I-Laser Vision System is a straightforward process that enables all printing and cutting to work seamlessly together to significantly increase throughput. Job data such as cutting files, nesting, paneling, scaling, orientation, and registration marks are shared directly with the laser cutting system, which minimizes the need for operator intervention. Integrated with a MultiCam laser system, I-Laser Vision totally automates cutting and trimming for a wide range of flexible and rigid materials.

Simply open the cut file from the Magnus control panel, place the items to be cut on the table, and the I-Laser Vision system takes it from there. The system finds, orients the part and cut files, and automatically starts cutting with perfect alignment. It is that simple!

Substrate printed with vision system fiducials.

ENGRAVING APPLICATIONS

The Magnus is an engraving powerhouse.

The Magnus CO2 laser is not only the best selling large format laser system, it is also the fastest engraving system on the market. When equipped with engraving accessories, the Magnus can efficiently process large areas at high speeds with a resolution equivalent to printing. No other system on the market is this flexible and offers more ways to get the job done than a MultiCam Magnus Laser.

The Magnus is more than just a big engraver, it is the result of over 25 years of development. In fact, MultiCam spends more on R&D then any of our competitors.

But what makes a Magnus even more valuable to you is the support behind it. The difference is we show you how to make money with your Magnus CO2 Laser, not just how to use it. MultiCam has been building laser systems since 1989 and offers years of experience helping customers select, customize, and operate machines for a variety of applications.

Acrylic: Two emerging trends in acrylic are edge-lit and light piping. The Magnus can engrave this material at high speeds with absolute precision.

Tile: Decoration of stone and tile is one of the strengths of the Magnus. It is able to switch between large and small items as well as thick and thin projects. The Magnus is a money-making powerhouse.

Glass Engraving: The Magnus is the only laser system on the market that can consistently engrave glass (both tempered and float) with clean and smooth surfaces. Years of effort went into developing a process and the technology that allows flawless processing of glass projects. The MultiCam Magnus CO2 laser is the solution which replaces sandblasting and provides photographic details that not even acid etch can provide.

Slate: The Magnus offers a host of features specifically designed to make your company productive when processing stone or tile.

Wood: With the Magnus CO2 laser, carving and engraving can be done with exacting detail in 2-D and 3-D at speeds that are profitable for your company.

Granite: Granite memorials are some of the easiest and most profitable ways you can use your Magnus. With an integrated hydraulic lift table, the Magnus can lift and position stones that weigh in excess of 4000 pounds. No other system on the market offers these features in a single system.

FEATURES AND COMPONENTS

No machine in its class offers more standard features than the innovative and versatile Magnus CO2 Laser.

Adjustable Table Surface: The unique table system allows the table height to be adjusted in .5”/12mm increments quickly and easily for fast job change over and maximum flexibility.

Remote Pendant: The remote pendant allows for full machine control anywhere around the laser. It provides full color graphics display and easy access to all your job files.

Precision Motion: The Magnus utilizes the highest-grade, precision-ground rack and pinion drive system, ensuring precise position and smooth motion (model dependent).

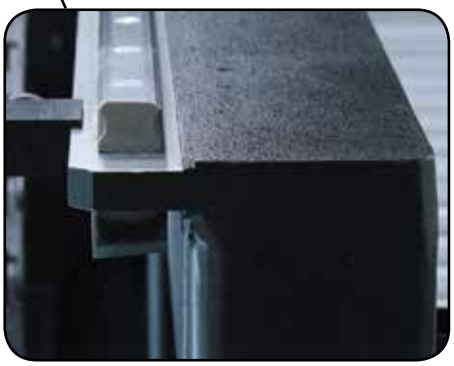
High Precision Servo Drives: The Magnus uses advanced, all-brushless servo motor drives that are directly connected to the main motion board for faster servo update rates and seamless motion at high speeds.

Hydraulic Lift Table: The hydraulic lift table system allows for quick and easy table adjustment for oversized and heavy object positioning.

Cutting Head Options: The Magnus head assemblies are quick and easy to swap for any application you might have; from our standard head to our active height-following assembly. In addition, The Magnus head assemblies have a wide range of optic choices to suit any cutting or engraving requirement.

Sealed Metal Tube Laser: The Magnus is available with lasers from 35 Watts to 1500 Watts (model dependent).

Standard Table Configuration: The Magnus includes down draft fume evacuation and adjustable table supports with the ability to choose the best table surface for the job.



Solid Steel Contruction: The all-welded steel construction of the Magnus is stress relieved and precision machined to make a robust and accurate system.

FEATURES AND COMPONENTS

Get the most out of your machine by incorporating an array of available options.

With the **I-Laser** option, the Magnus can quickly orient and align cut files for fast processing of printed materials.

The optional **PC Workstation** is ideal for on-the-fly program changes or when I-Laser is added to the Magnus

Updraft Fume Extraction allows for the cutting fumes to be removed at the source which in-turn offers the capability to cut thicker materials at lower power lasers, ensuring clean edges.

The integrated **Roller Track** allows for heavy objects to move smoothly and can be quickly and easily swapped to other table options.

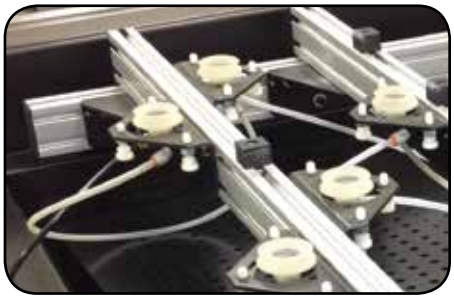
Honeycomb Table: This option is ideal for cutting flexible materials or small contour cuts.

The unique **Adjustable Slat Table** supports are ideal for quick job changes. The slats adjust on 1.5”/35mm centers and can easily be repostitioned to allow cut parts to drop through. A second adjustment position allows for the honeycomb insert to be installed quickly and easily.

Stacking Material Loading System is a fully integrated material loading system designed to save time loading and unloading the table.

The **Rotary** option can be used for both cutting and engraving applications and comes standard with an adjustable tail stock.

With the **Glass Table** option the use of adjustable vacuum cups allows for quick and easy setup of glass projects while compensating for warped sheets.



The **Sliding Table** option allows for two complete work zones on one machine. It is ideal for fast throughput jobs allowing quick load and unload of the table while the laser is processing on the adjacent table. The slider table can double throughput on a single laser system

Applications and Materials Suited for the Magnus CO2 Laser

- Plastic Fabrication
- Light Metal Fabrication
- POP/Store Fixture
- Large Format Print Finishing
- Automotive
- Textiles, Garnet & Embroidery
- Shoes & Footwear
- Woodworking
- Composites
- Electronics
- Packaging
- Aerospace
- Glass
- 3D Wood Engraving
- Acrylic
- Leather
- Coated Metals
- Ceramic
- Melamine
- Paper
- Fiberglass
- Corian
- Fabric
- ...and so much more!

Work Area	50” x 50” / 1250mm x 1250mm	50” x 100” / 1250mm x 2500mm	74” x 122” / 1860mm x 3000mm	50” x 100” / 1250mm x 2500mm	64” x 122” / 1625mm x 3000mm
Available Laser Wattage	35, 90, 170	35, 90, 170	35, 90, 170	170, 250, 450, 1000, 1500	170, 250, 450, 1000, 1500

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