

Innovative laser system engineering
PRODUCT OVERVIEW



Discover the fascinating world of laser technology.

Specialists in laser systems for cutting, engraving and marking

eurolaser designs, develops and produces innovative laser systems for material machining in industry and craftwork. With a multiplicity of potential uses, the Lüneburg-based company has established a position showing the way ahead for new and established laser applications in many sectors of industry.

Efficient systems

A completely modular concept underpins our laser systems, so that we can always take a flexible approach to our customers' needs. High-quality components ensure reliability, a long working life and guarantee a positive price-performance ratio for the investment.

Successful customers - worldwide

Anybody who wants to remain competitive in today's markets is switching from conventional production processes to superior laser technology. Due to economical and flexible production with our systems, many users ensure themselves additional growth and consequently, long-term success. Quite often, they take into consideration purchasing another laser system after a short time which reflects in a high degree of customer satisfaction.

Many years of expertise

To establish which laser system is best suited to their applications, potential and existing customers are encouraged by eurolaser to carry out comprehensive material tests. The experts in the use of lasers from our Application Center have experience of over 10,000 successful prototypes. Know-how which results in a payoff for you.

High-Tech made in Germany. Our aim is your success!





ACRYLIC

Page **6**

In many fields, laser technology is displacing conventional machining processes for the machining of acrylic glass or Plexiglas® as if it had been created for the task.



WOOD

Page **10**

This is a favorite natural material that has been used for numerous purposes for a very long time. Contactless laser machining protects the material, is capable of very fine detailing and opens up new opportunities.



TEXTILES

Page **14**

The requirement for laser machining of woven, non-woven and synthetic materials is growing all the time. Intelligent material handling units and detection systems can automate the production process completely.



FOILS

Page **18**

A laser's high precision and flexibility makes it the ideal tool for film applications, with obvious potential compared with conventional production processes.



ADDITIONAL POTENTIAL APPLIKATIONS

Page **22**

The benefits of laser technology are increasingly used in a growing number of sectors of industry and it is the production technology for the future.



LASER CUTTING SYSTEMS

Page **24**

Our powerful laser systems are designed for use in both craftwork and industry. The modular construction with high-quality components guarantees quality for the most demanding applications.



AUTOMATED SYSTEMS AND OPTIONS

Page **28**

Customized automated systems improve the efficiency and commercial viability of laser cutting systems. A multitude of options extend the applications and simplify everyday jobs.



MECHANICAL MACHINING

Page **34**

Use the laser plus up to two mechanical tools in parallel on one machine. The entire high-quality range of Zünd tools is available for you. Extend your machining and material options without expensive additional investments.



PICK'N PLACE - AUTOMATIC SUPPLY

Page **37**

Optimise your production process by automating the supply of your laser system. With our flexibly configurable and scalable robot systems, your jobs will be done quickly and accurately.



WORLDWIDE SERVICE

Page **38**

We give advice and support you over the entire life cycle of our products with a wide range of services, so that your investment achieves a maximum return both now and in the future. Many of our systems are operating more than 15 years and are still working flawlessly.

ACRYLIC



An overview of the advantages of laser machining:

- Crystal clear, smooth cut edges in a single process
- No need to clamp or fix the acrylic
- No chips - less contamination and reduced overheads
- Attractive engraving results in a matt silk finish
- Practically radius-free cutting of inner contours
- Machining with protective film possible - no damage to the material



Displays



Sprue removal



Modeling



Signing



Point of Sale



Labeling



Trophies



Shopfitting



Furniture



Medical systems

What can laser technology do better?

Laser cutting of acrylic compared with milling and sawing

Laser technology is becoming more established in manual and industrial acrylic machining. Of course there are reasons for this. But what exactly are the advantages of this technology and how is it different from alternative machining methods. This comparison gives you an overview of the key issues:



Matt silken engravings



Clear, smooth cut edge in a single operation




































No contamination as with milling

We recommend the laser systems

XL-1200, **XL-1600** und **XL-3200**
for processing acrylics.

ACRYLIC MACHINING – A COMPARISON

	 LASER CUTTING	 MILLING	 SAWING
Cutting edge quality	 smooth / clear	 matt	 rough
Cut quality in the cycle	 constant	 decreasing	 decreasing
Cutting accuracy	 good	 good	 poor
Fine details / radius-free inner contours	 yes	 conditional	 no
Flexibility / Individuality	 high	 conditional	 slight
Labeling / Engraving	 yes	 conditional	 no
Contamination	 no chips	 chippings	 chippings / dust
Material damage / breakage	 contactless	 mechanical stress	 mechanical stress
Tool wear	 no wear	 easy exchange, if worn	 easy exchange, if worn
Material waste	 very little	 high	 average

COMPARISON OF THE WORK PROCESSES

LASER: Design ► Process ► Product ✓

MILL: Design ► Fixing ► Tool selection ► Process ► Slacken fixing ► Cleaning/Polishing ► Product ✓

SAW: Design ► Fixing ► Tool selection ► Process ► Slacken fixing ► Cleaning/Polishing ► Product ✓

What options do we offer you?

Acrylic machining with laser systems by eurolaser

The requirement-focused modular design enables eurolaser laser systems to be specially configured to suit every requirement and at the same time provides the necessary flexibility. The system design is focused mainly on requirements that are generated from later use.



Table concept
"Raster plate"

For machining acrylic, laser systems are provided with a special table concept, the raster plate. Its absorption area reduces surplus laser energy to a minimum and in this way prevents reflections and damage to the material. Laser power, machining area and optional automation techniques are selected according to your needs. This customer-focused system specification is based on the experiences of successful users the world over and can be demonstrated by means of more than 10,000 different application results in our Application Center.

Automated processes for your laser system

Higher productivity, more economical working - save time and money

■ Shuttle Table System

This enables loading and unloading of the machining table during laser machining and demonstrably delivers an increase in efficiency of up to 75% when using a laser system.

[... more on page 28](#)

■ Remote Operation

The software-controlled division of the work area allows laser system operation on alternate sides. This enables production to be continued on the opposite side while removing and reloading material.

[... more on page 29](#)

Optional extras

Customized options simplify everyday tasks and increase your possibilities

■ POSITION plus

Automatic camera detection enables printed materials to be cut out precisely along the printed outline. Even copying tolerances in the printed format can be compensated by software control.

[... more on page 32](#)

■ PICTURE plus

This optional raster engraving unit allows machining of image files and production of both 2D-images and 3D-reliefs. Engraving is possible with a resolution of up to 1200 dpi and in 256 shades of grey.

[... more on page 33](#)

■ Mechanical Machining

Use the laser plus up to two mechanical tools in parallel on one machine. The entire high-quality range of Zünd tools is available for you. Extend your machining and material options without expensive additional investments.

[... more on page 34](#)

WOOD



An overview of the advantages of laser machining:

- No chips - less contamination and reduced efforts
- Precision details and radius-free inner contours possible
- Contactless machining - minimum waste, no breakages
- Burr-free cut edges - no rework needed
- No need to clamp or fix the workpiece
- Comprehensive range of machining options for producing dieboards



Shop /
exhibition construction



Floor coverings



Modeling



Toys



Engravings



Woodwork



Dieboards



Furniture



Musical instruments



Veneer / Inlays

What can laser systems do better?

Laser cutting of wood in comparison with milling and sawing

Wood is used in a very wide range of sectors and has always been a much loved material because of its versatility in use. Efficient laser technology is increasingly being used for machining, because it provides a multitude of options compared with conventional machining methods and offers particular advantages through contactless material machining. This is illustrated by a comparative overview:



Filigree cuts without damaging the material



Exact inlays from veneer



High quality relief engravings

We recommend the laser systems

M-800, M-1600 and XL-1600

for processing wood.

A COMPARISON OF WOOD AND VENEER MACHINING

Cutting edge quality

smooth, chip & burr-free

Cut quality in the cycle

constant

Cutting accuracy

good

Fine details / radius-free inner contours

yes

Flexibility / Individuality

high

Labeling / Engraving

yes

Contamination

no chips

Material damage / breakage

contactless

Tool wear

no wear

Material waste

very little



LASER CUTTING



MILLING



SAWING

unmachined / matt

decreasing

good

conditional

conditional

yes

chippings

mechanical stress

easy exchange, if worn

high

unmachined / matt

decreasing

average

no

slight

no

chippings / dust

mechanical stress

easy exchange, if worn

average

COMPARISON OF THE WORK PROCESSES

LASER: Design ► Process ► Product ✓

MILL: Design ► Fixing ► Tool selection ► Process ► Slacken fixing ► Deburring/Grinding ► Product ✓

SAW: Design ► Fixing ► Tool selection ► Process ► Slacken fixing ► Deburring/Grinding ► Product ✓

What options do we offer you?

Woodworking with laser systems by eurolaser

The modular design enables eurolaser systems to be specially configured to suit every requirement. We analyze your requirements and configure the laser system individually for you.

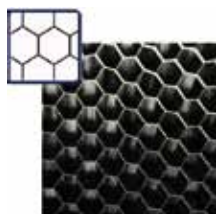


Table concept
"Honeycomb"

Special table concepts are needed for ideal wood machining. Thin wooden materials, such as veneers, MDF and plywood < 10 mm thick are cut on an aluminum frame similar to honeycomb. For cutting stamped outlines or solid timber > 10 mm in thickness, it is preferable to use the PIN concept. This comprises stable brass or PMMA locating pins and provides for perfect machining with increased smoke emissions.



Table concept
"PIN-Concept"

We select laser power, machining surface and optional automation systems to suit your requirements. To do this, we refer to our test results with your material and our experience from more than 10,000 application samples.

Automated processes and options for your laser system

Higher productivity, more economical working - save time and money

■ Shuttle Table System

Increase the productivity of your laser system by up to 75% by avoiding downtimes.

[... more on page 28](#)

■ Remote Operation

Loading and unloading during the cutting process allows you to produce more quickly.

[... more on page 29](#)

Optional extras

■ POSITION plus

You use the optical recognition system to detect cutting marks on printed material.

[... more on page 32](#)

■ PICTURE plus

Engrave with a resolution of up to 1200 dpi and produce 3D-reliefs.

[... more on page 33](#)

■ Mechanical Machining

Using different toolheads, such as milling cutters or knives, opens up even more machining options to you - without purchasing a second machine.

[... more on page 34](#)

Dieboards for the packaging industry

One system - all applications

■ Laser Dieboards

Cut with constantly high accuracy from 1 pt to 6 pts. Focus your cutting with the box cut process. At the same time, less material vaporizes, which means fewer emissions and therefore more cost-effective extraction and filter systems.



■ Cutting of ejection rubbers

With the optional Zünd knife cutting tools, installed parallel to the laser, you can cut ejection rubber even with an angle. You do not need a drying process, as with water jet cutting systems.



■ Production of packaging templates

Samples for design, material and functional alternatives can be produced simply, quickly and inexpensively with the Sample-maker tool set.



■ Marking of material surfaces

Mark ejection rubbers simply with the pen module, mark multiplex dieboards using precise laser engraving or mark cardboard boxes in rich contrast with our Ink Marker - all on a single system.



TEXTILES

An overview of the advantages of laser machining:

- No fabric distortion by using contactless machining
- Precise and filigree cuts
- Machining very large formats by means of seamless cutting transition
- Sealing of the cut edges - hence no fraying
- Machining in all directions - regardless of the fabric structure
- Fully automatic machining from the roll





Clothing



Upholstery

Textiles for use
in the home

Parachutes / sails



Filters / technical textiles



Flags / pennants



Leather goods



Protective fabric



Automotive

Medical systems /
orthopaedics

What can laser systems do better?

Laser cutting of textiles compared with punching and knife cutting

Every day, more application possibilities arise for the use of laser technology in the textile market. Our laser systems for cutting, engraving and marking are meanwhile being used efficiently across all sectors of industry, both for short runs and for industrial mass production runs. Because the reasons for introducing laser technology into this branch of commerce are numerous, this comparison shows you what the advantages are compared with alternative methods of machining:



Precise cuts in spacer fabrics



Refinements by engraving






Smooth, lint-free cut edges

We recommend the laser systems

L-3200, **XL-3200** and **2XL-3200**

for processing textiles.

A COMPARISON OF TEXTILE MACHINING	 LASER CUTTING			 KNIFE CUTTING			 PUNCHING		
Cutting edge quality	👍 smooth			👎 frayed			👎 frayed		
Cut quality in the cycle	👍 constant			👎 decreasing			👎 decreasing		
Fine details / radius-free inner contours	👍 yes			👎 conditional			👎 conditional		
Cut edge sealing <small>(Synthetic / natural materials / mixtures)</small>	👍 yes / no / yes			👎 no / no / no			👎 no / no / no		
Flexibility / Individuality	👍 high			👍 high			👎 slight		
Labeling / Engraving	👍 yes			👎 no			👎 no		
Material distortion when cutting	👍 no, because contactless			👎 yes			👎 conditional		
Multi-layer cutting	👎 conditional			👍 yes			👍 yes		
Tool wear	👍 no wear			👎 easy exchange, if worn			👎 expensive exchange, if worn		
Tool storage costs	👍 no tool store			👎 low storage costs			👎 average storage costs		

COMPARISON OF THE WORK PROCESSES

LASER: Design ► Process ► Product ✓

KNIFE: Design ► Clamp knife ► Process ► Separate residual material from product ► Product ✓

DIE: Design ► Produce dieboard ► Clamp ► Process ► Separate residual material from product ► Product ✓

What options do we offer you?

Textile machining with laser technology by eurolaser

We can customize the technology exactly to the needs of your application through the modular design of our laser systems. You will receive from us a laser system specially configured for your requirements and designed to meet your needs which will arise in later use.

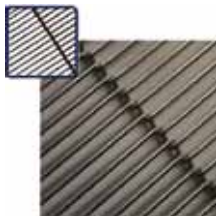


Table concept
"Conveyor"

A special table concept is used for textile machining. This comprises a stainless steel wire mesh and is particularly suitable for thin and flexible materials. On the one hand, this is used as the material support for the machining process and, on the other, the transport element for the Conveyor System.

The eurolaser conveyor system comprises different mesh widths in line with the properties of the material, such as material thickness, rigidity and dimensions of the finished product. This enables us to guarantee the ideal configuration for your material.



Automated processes for your laser system

Higher productivity, more economical working - save time and money

■ Conveyor System

By using this automatic material feed, textiles can be fed for laser cutting directly from the roll and routed after laser cutting directly to a table extension. With a high degree of connecting accuracy after a material feed cycle, sections, which for all practical purposes are endless, can be produced. The bale material is fed via an automatic feeding unit. An feeding system edge controller ensures accurate positioning of the material. There is even an option to add a winding unit to the Conveyor System. This is used for the even winding of previously processed textiles and this accordingly results in a completely automated cutting process.

[... more beginning on page 30](#)

Optional extras

Customized options simplify everyday tasks and increase your possibilities

■ POSITION plus

The optical recognition system uses reference points which enable you to cut printed textiles exactly along the printed outline. Material edges and patterns are also detected. Software control compensates for pressure differences.

[... more on page 32](#)

■ Label Module

Fast labelling of single parts in one working process for further processing or direct labelling of your products with your brand logo.

[... more on page 36](#)

■ Ink Printer Module

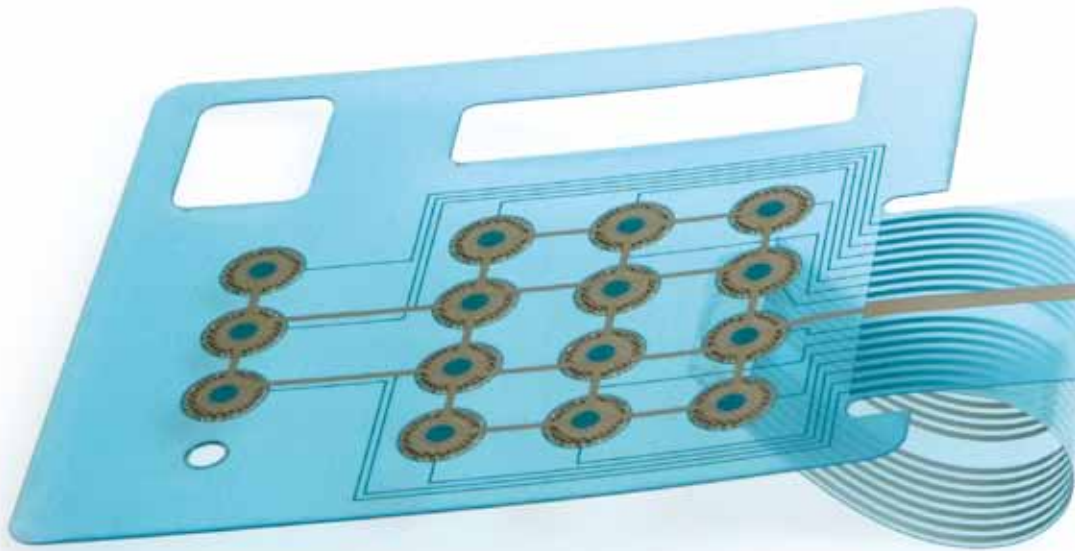
Label your cuttings or affix labels directly with the precision print head. Ideal for serial numbers, logos, barcodes or sewing marks.

[... more on page 36](#)

FOILS

An overview of the advantages of laser machining:

- High precision - the most minute cutouts are possible
- No sticking of residues to the tool
- Cut edge sealing
- No mechanical stressing of the material
- High flexibility
- No upfront costs for tool construction





Protective display films



Membrane keyboards



Front films



Flexible PCBs



Adhesive films



Hightech / Ito films



Fittings



Labels



Spacers

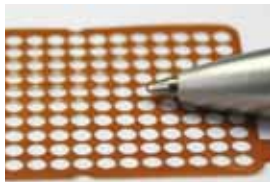


Labeling films

What can laser technology do better?

Laser cutting of foils compared with punching and knife cutting

Both the enormous variety of materials for synthetic films and increasingly demanding customer requirements are causing the market to look for flexible and efficient production methods. Innovative laser technology is becoming increasingly significant for these applications. High precision is opening up new opportunities, whereas alternative processes are already up against their limits. As in industrial film machining, the advances in laser systems are very much in demand, so that, meanwhile, laser systems are frequently integrated into fully automatic production lines. A comparison of laser cutting with punching and knife cutting shows the following basic advantages:



Filigree details



Cut edges of multi-layer film in detail



Kiss cut and laser labeling for thin films

We recommend the laser systems
M-800 and **M-1600** for processing foils.

A COMPARISON OF FOIL MACHINING

	 LASER CUTTING	 KNIFE CUTTING	 PUNCHING
Cutting edge quality	 no exfoliation	 exfoliation	 exfoliation
Cut quality in the cycle	 constant	 decreasing	 decreasing
Cutting accuracy	 good	 good	 average
Fine details / small holes	 yes	 conditional	 no
Cut edge sealing	 heat-sealed	 no sealing	 no sealing
Flexibility / Individuality	 high	 conditional	 slight
Tool storage costs	 no tool store	 low storage costs	 average storage costs
Speed	 high speed	 average speed	 very high Speed
Tool wear	 no wear	 easy exchange, if worn	 expensive exchange, if worn

COMPARISON OF THE WORK PROCESSES

LASER: Design ► Process ► Product ✓

KNIFE: Design ► Clamp knife ► Process ► Separate residual material from product ► Product ✓

DIE: Design ► Produce dieboard ► Clamp ► Process ► Separate residual material from product ► Product ✓

What options do we offer you?

Foil machining with laser systems by eurolaser

The machining of technical foils and films always means a production engineering challenge. A high degree of material diversity with concurrently high demands for product precision, long life and diverse areas of application demand maximum flexibility from production methods. It is precisely in this environment that the advantages of eurolaser's modular system design and the universal application of laser technology become particularly significant. In order to guarantee that your system is ideally suited for your application, we concentrate during system design on the requirements that will arise from later use.

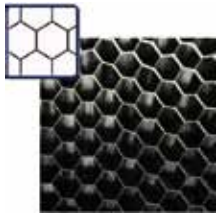


Table concept
"Honeycomb"

For foil machining, laser systems are provided with a special table concept, the honeycomb. The beeswax-like structure, from a thin aluminum foil, is very stable and allows a particularly good vacuum to form under the material. This very level tabletop is therefore used for materials with an unstable surface. Laser power, machining area and optional automation techniques are selected according to your needs.

Automated processes for your laser system

Higher productivity, more economical working - save time and money

■ Shuttle Table System

The machining table can be exchanged in a few seconds, so that loading and unloading can take place during laser machining. Your productivity will be almost doubled and your laser system used even more effectively.

[... more on page 28](#)

■ Remote Operation

The software-controlled division of the working area means that laser machining of the foils can take place on the laser system on alternate sides. This enables production to be continued on the opposite side while removing and reloading material.

[... more on page 29](#)

Optional extras

Customized options simplify everyday tasks and increase your possibilities

■ POSITION plus

The material position is determined using reference marks and camera detection. This allows you to follow a printed outline precisely while cutting. Even copying tolerances in the printing can be compensated for by software control.

[... more on page 32](#)

■ Mechanical Machining

Mechanical tool heads can be installed parallel to the laser, giving you the option to use tools such as milling cutters or knives. A valuable extension to your machining options with just one system technology.

[... more on page 34](#)

■ Ink Printer Module

Mark your foils or labels directly with the precise print head. Ideal for serial numbers, logos or barcodes.

[... more on page 36](#)

■ Label Module

Fast labelling of single parts in one working process for further processing.

[... more on page 36](#)

ADDITIONAL POTENTIAL APPLICATIONS



An overview of the advantages of laser machining:

- High precision and repeatability
- No tool wear - no reduction in quality
- No material fixing needed
- Very good cutting efficiency through excellent laser beam preparation
- No mechanical stressing of the material
- High flexibility



Stone / granite / marble



Prototyping for universities
and research



Composite materials



Glass



Coated materials



Foams



Paper / card /
cardboard



SMART-X® and
other light foam
boards



Coated metals /
stainless steel



and many others

LASER CUTTING SYSTEMS



L-3200

eurolaser

Partner for your success.

Versatile system solutions



M-800



M-1200

M-1600



L-1200

L-3200



XL-1200

XL-1600

XL-3200



2XL-3200

3XL-3200



Our modular design guarantees you ideal system configuration

Properties which will convince you:

- With a sealed-off CO₂ laser, you are using a 'tool' that is almost zero maintenance
- The movement system from the world market leaders Zünd has proved itself 20,000 times in the market place and provides you with maximum reliability
- You work software-independently and need no license, because the laser system is controlled with your normal PC (no machine software needed)
- Always keep up with the latest state of the art and save cash with our modular design and expandable modules
- An intelligent and at the same time practical safety concept combines maximum machine and operating safety with more effective use
- The freely accessible machining area allows you to load and unload quickly
- Integrated live monitoring and remote diagnostics tool Watchdog

You benefit from:

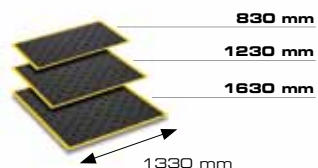
- Depending on the requirement, laser power between 60 and 600 watts
- Very good repetition accuracies through the excellent direct-drive
- High-quality beam control and beam formation components to optimize cutting and engraving quality
- A variety of focal lengths which are tailored to your requirements
- Compressed air and purge gas supply units for optimum cutting results

Different automated systems and options for even more economical working

... more about this on pages 28-37

A variety of processing areas tailored to your applications

M-Line



■ M-800

Processing area: 52.3" x 32.6" (4.3' x 2.7')
Laser power: 60 to 400 W

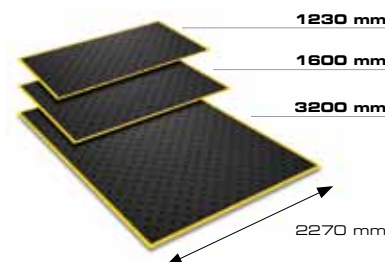
■ M-1200

Processing area: 52.3" x 48.4" (4.3' x 4')
Laser power: 60 to 400 W

■ M-1600

Processing area: 52.3" x 64.2" (4.3' x 5.3')
Laser power: 60 to 600 W

XL-Line



■ XL-1200

Processing area: 89.3" x 48.4" (7.4' x 4')
Laser power: 60 to 600 W

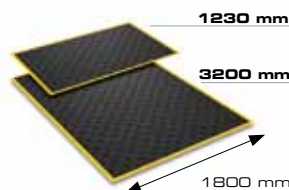
■ XL-1600

Processing area: 89.3" x 63" (7.4' x 5.2')
Laser power: 60 to 600 W

■ XL-3200

Processing area: 89.3" x 126" (7.4' x 10.4')
Laser power: 60 to 600 W

L-Line



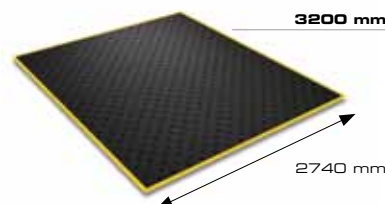
■ L-1200

Processing area: 70.8" x 48.4" (5.9' x 4')
Laser power: 60 to 600 W

■ L-3200

Processing area: 70.8" x 126" (5.9' x 10.4')
Laser power: 60 to 600 W

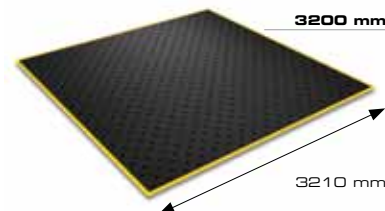
2XL-Line



■ 2XL-3200

Processing area: 107.8" x 126" (8.9' x 10.4')
Laser power: 60 to 600 W

3XL-Line



■ 3XL-3200

Processing area: 126.3" x 126" (10.5' x 10.4')
Laser power: 60 to 600 W

SHUTTLE TABLE SYSTEM



Increase the productivity of your laser system

- Ensure better system utilization by loading and unloading during the cutting process
- The moving material supports enable you to access the produced parts more easily
- You minimize down times and increase the viability of your laser system
- The system is not encapsulated, so that it is allowing Robot assembly (24/7 - operation)
- New material is located on the top shuttle table, thereby no remaining material chips are falling onto the new material

The Shuttle Table System is available as automatic and manual version combined with the new systems. Due to simple installation, the system can also be used with one engaged table module only.

The innovative Shuttle Table System developed by eurolaser is currently available with the M-800, M-1200, M-1600, L-1200 and XL-1200 models.



Free access to the material



Simple material support exchange

Shuttle Table System automatic (STA)

- Table shift at the touch of a button
- Process starts automatically after cutting is finished
- Time saving by optimised processes
- Minimising supervision of the laser system
- Additional manual handling possible
- Snapping table module in after the shuttle process prevents incorrect handlings

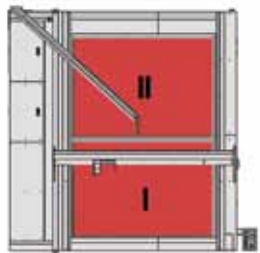
REMOTE OPERATION



euro^{laser}
Partner for your success.

Alternate operation allows you to make more use of the system

- Load and unload your laser system during the cutting process
- The integrated safety concept makes material removal and loading absolutely risk-free
- Make full use of your laser system's capability by reducing breaks in production



View of the laser system with split processing area

A software-controlled partition of the processing area allows you to machine your material with the laser on one side of the system and to reload the other side at the same time. The laser machining changes over automatically at your discretion between both areas, so that your system is in almost 100%-use.



The RO function is available for the following basic models:
M-1600, L-3200, XL-1600, XL-3200.

CONVEYOR SYSTEM

**Automate the material feed for continuous textile machining**

- You will work more economically by using automatic material unwinding and feeding
- Remove workpieces during the cutting process
- There will be no fabric distortion, because the material feed is stressfree
- Your material will be positioned precisely on the machining table and fixed during the cutting
- Machine very large formats by means of seamless cutting transition

The Conveyor System is available for the following basic system sizes:

M-**1200**, L-**1200**, L-**3200**, XL-**1600**,
XL-**3200**, 2XL-**3200**, 3XL-**3200**.

eurolaser

Partner for your success.



Winding unit:

Allows you to rewind your material directly on to a roll after laser machining.



Container:

Collect left-over material directly in a moving catchment device at the end of the table extension.



Table extension:

The material is transported to this table extension automatically after machining. You remove your material safely while the laser system resumes cutting.



Ink Printer Module:

Inscribe your workpieces or adhered labels directly with the precision Ink Printer Module. Its high resolution enables the printing of the finest lettering and graphics.



Feeding unit:

Feed your material for laser machining directly from the roll. The edge control also guarantees exact positioning of the workpiece.





The Optical Recognition System guarantees precise cutting of printed materials

- Achieve high cycle times with a high degree of process safety and minimal machine setup times
- The workflow manager ensures extensive automation of the work process
- You will optimize the exploitation of your area and minimize your material consumption with the powerful nesting feature
- Improve your cutting results by using software-controlled compensation of say shrinkage, expansion and twists in the material

BEFORE

The cutting contour is varying - no adjustment to the printing

AFTERWARDS

The cutting contour is adjusted to the printing

Normal offset



Compensation



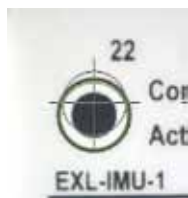
Rotation



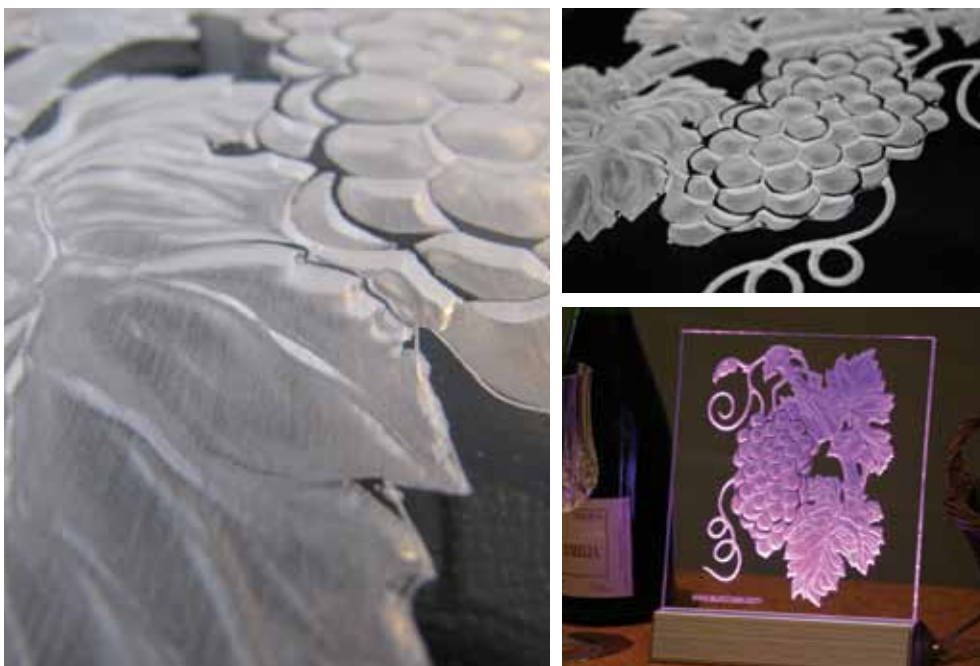
Linear compensation



The CCD camera is installed directly on the machining head and searches the workpiece for the defined fiducial marks at the beginning of the machining process. In this way, woven or embroidered fiducial marks, as well as other contrasting outlines, can be recorded visually. Both the actual location and the dimensions of the workpiece are detected exactly in this manner and will be considered automatically for further machining.



An intelligent analysis of the fiducial marks now also allows the dimensions to be compensated by a Nominal-Actual comparison of the printed data. Naturally, this takes place entirely in accordance with the user's wishes and requirements. The quoted properties are used to optimize or adjust to the required dimensions. A real plus for quality assurance.



Engrave razor-sharp images

- Produce 2D-images and 3D-reliefs in photographic quality
- You can produce vector engravings, raster engravings and vector cuts in a single work process
- Engrave with up to 256 shades of grey and a resolution of up to 1200 dpi
- No chips are produced while engraving and the material does not need to be clamped
- No tool change is necessary for this option

The principle is similar to that of an inkjet printer. The bundled light beam is responsible for a contrast change or material wear on the surface. Depending on the material for machining, a contrast can arise through burning, color change, layer wear or deep engraving. This option can be retrofitted by our service engineers without any problems on nearly all systems built from 01.03.2001 onwards.



MECHANICAL MACHINING



Use the best range of tools in parallel to the laser!

Use the laser plus up to two mechanical tools in parallel on one machine. The entire high-quality range of Zünd tools is available for you. Extend your machining and material options without expensive additional investments.

This gives you

- up to three tools in parallel on one machine
- a range of tools with uncountable possible combinations
- high-quality, market-tested tools from Zünd Systemtechnik AG
- maximum versatility
- additional options for combining the high-quality camera for printed materials with all tools
- high speed and stability in the machining process
bayonet lock for fast tool changes

Maximum versatility and the right tool for every application!

The modularity of the eurolaser systems means you can fulfil every customer wish and are at home in every market.

3 in 1



Laser plus two mechanical tool heads

Many options on a single system are open to you - they are almost infinite

- Knife cutting, grooving, milling, labeling, kiss cutting, scribing, drilling and much more will open up new production horizons for you
- The high performance tools are ideally suited to industrial applications (24 hours a day / 7 days a week) and are easy to use
- With a minimum investment, you will receive maximum possible flexibility
- Tools can be retrofitted at any time as needed

Combination of laser and mechanical tools

(even materials, which are not suitable for laser, can be processed)



Milled groove
and laser cut



Milled DIBOND®



Knife-cut PVC



Depending on your requirements, choose between the laser and proven precision tools from the Swiss company Zünd Systemtechnik AG. There are a variety of tool-inserts available:

- ▶ Tangentially controlled knives
- ▶ An assortment of milling tools
- ▶ Pneumatic and electrical oscillating tools
- ▶ Kiss cutting knives
- ▶ Rotating knives
- ▶ Various marker tips
- ▶ Grooving wheels

The right tool for every application!

ZÜND
swiss cutting systems

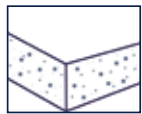
Additional materials:



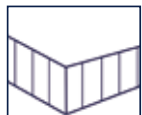
PVC plates, foils and foams



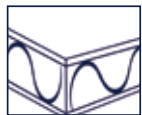
Teflon® and metal coated materials



Thick PU foams



Polycarbonate



Cardboard in sandwich design



Composites

INK PRINTER MODULE



+ LABEL MODULE



up to 3 print heads in parallel

Ink Printer Module



Label Module

Ink Printer Module und Label Module can perfectly be combined.

Ink Printer Module – print head for precise marking

- Print in best quality with up to 600 dpi
- Ideal for applying of sewing marks, barcodes, logos or serial numbers
- Marking of affixed labels or material (e.g. textiles, acrylic, wood, foils)
- Use different inks and colours with high wipe and abrasion resistance

Label Module – fast and flexible labelling

- Label single parts for further manufacturing processes
- Mark products with your logo or other information
- Use printed or blank labels
- Utilise different adhesive properties according to requirements and material



Printing on different materials



Precise printing results with 600 dpi



Labelling of cuts



Cartesian robot systems for supplying



Economical and flexibly automated

Optimise your production process by automating the supply of your laser system. With our flexibly configurable and scalable robot systems, your jobs will be done quickly and accurately.

Your advantages:

- Cost advantages through automatic loading and unloading
- Flexible adaptation to your application
- Variable size scaling
- High process reliability by minimising mistakes
- Flexible robot usage through simple self programming
- Saving time through optimised processes
- Wide material choice through numerous gripping and picking solutions

Individual and adequate configuration

We configure Pick'n Place especially for your requirements. Therefore, individual factors can optimal be considered and you are working with a best possible solution for your workflow.

We consider among other:

- | | |
|---------------|------------------------|
| ■ Material | ■ Workflows |
| ■ Size | ■ Working environments |
| ■ Clock cycle | ■ and much more |



WORLDWIDE SERVICE



Our comprehensive service package to guarantee you security of production



24 hours a day / 7 days a week support hotline

If necessary, you can reach our skilled contacts in person on the telephone around the clock.



Application optimization for maximal productivity

Our experts will work out an ideal system configuration with you and calculate the best possible machining parameters for your application for maximal output.



Warranty up to 24 month

We offer you customized service agreements with a term of up to 24 month. In this way, you can increase your production engineering and financial security.



System and application training courses

Profit from customized training of your employees for effective programming and operation, as well as maximum safety while operating the machines.



Watchdog - Live Monitoring and Remote Diagnostics

Our 'Watchdog', an analysis tool unmatched in the laser branch, ensures you always have all the key functions of your laser system in full view. This live monitoring function displays key parameters and error messages in real time. Its remote diagnostics enable faster fault removal and better planning of service jobs.



Customer Relationship Management

Use our free, individual on-site consultancy concerning your system to use your existing resources to best effect and to discover unused potential.



Maintenance and System Upgrades

Our outstandingly trained technicians will ensure your laser system stays in perfect condition and will be pleased to advise you should your needs have changed over time.



Spare Parts Supply

With very good spare part availability, we will minimize unscheduled downtimes and keep your system serviceable at all times. We guarantee that we will use only high quality components.



Leasing & Financing

In co-operation with our finance partners, we will be pleased to produce individual leasing or financing alternatives for you.



SUPPLEMENTARY EQUIPMENT

Cooling - Exhaust - Filtering

We will make every effort to ensure that your laser systems exceed all statutory requirements and are safe and reliable. This also includes the peripheral units for powering the laser systems and for exhausting and filtering cutting emissions. We will of course also be delighted to advise you on the effective and safe use of your laser system.

Our many years of experience and co-operation with a variety of specialist partners guarantee application-oriented solutions precisely matched to each other which will be compatible with your individual needs. Safety through quality is our maxim.

Cooling units

The high-quality energy efficient cooling units are fitted with electronic temperature controllers and monitoring systems, so that they always control ideal conditions for laser beam sources, in order to guarantee constant performance.

Exhaust units

Suction devices are selected to match your application and the table concept of your laser system. This guarantees complete emission extraction above and below the material. To protect the machine controller and the employee, we also ensure that the machines stay safely below the AGW (Maximum Admissible Workplace Concentration) and TRK (Occupational Exposure Limits) guidelines.

Filtering units

Depending on needs and criteria, we provide different filter designs for coarse, fine and gaseous materials. Our range extends up to industrial solutions which are also suitable for ecologically certified businesses.



Energy Efficiency

eurolaser uses only the latest, energy-saving laser technologies and selected power supply systems in order to protect natural resources.

Individual, efficient, powerful - Invest in your future!



eurolaser

Partner for your success.

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