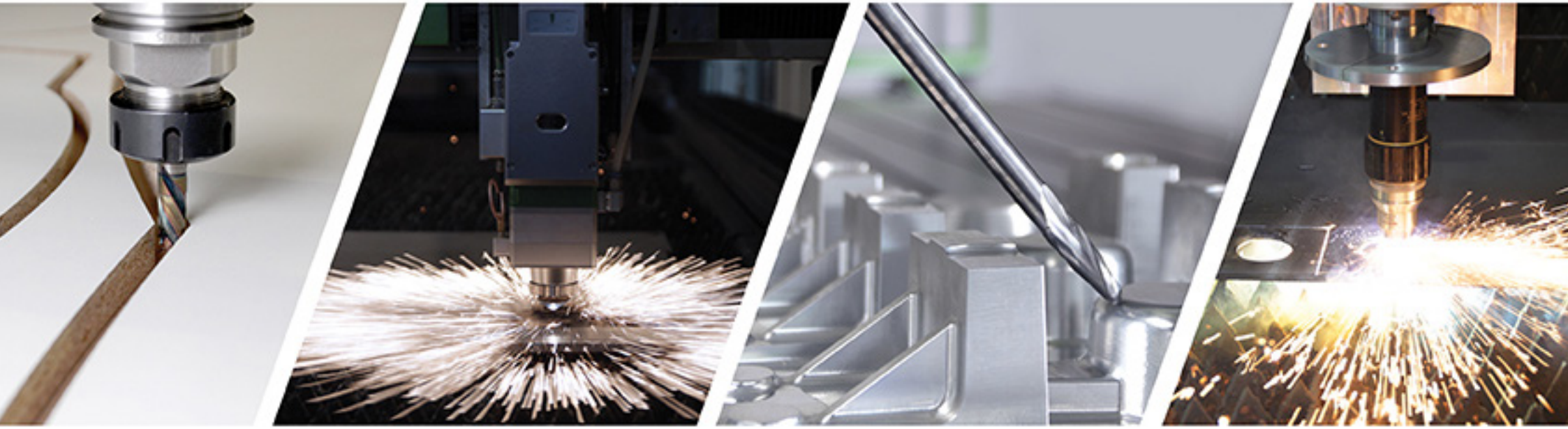
SERON®
Professional CNC Machines



PROFESSIONAL CNC MACHINES
MADE IN POLAND

MULTI-AXIS MILLING MACHINES | MILLING MACHINES | FIBER LASER CUTTERS | PLASMA CUTTERS | LASER ENGRAVERS | LASER MARKERS


# About us

Driven by a passion for numerically controlled machines, we are constantly strengthening the position of the SERON brand in the CNC industry and we have over 20 years of experience into the quality of our machines. The products in our offer are precision and highly efficient numerically controlled machine tools such as: 3, 4, 5 and 6-axis CNC machining centers, CNC milling plotters, cutters CNC, Fiber laser cutters, plasma (burners) CNC, laser plotters CO2, laser engravers. These products are the result of combining many years of experience, passion, determination to operate and develop our staff. The devices are designed and manufactured in the region with a rich industrial output having engineering staff with material and machining experience, in the heart of the Central Industrial District- Stalowa Wola. Seron machines are widely used in many industry sectors: automotive, areospace, metal, construction, industrial, foundry, molding, electronic, carpentry, furniture, advertising and many others. The devices are also perfect as reliable machines for working in a 24/7 system, they are configured to individual customer needs. We are convinced that the numerical machines we offer built on the basis of the Industry 4.0 concept are the future of many companies from Poland and abroad, because they enable the automation of production, reduction of its costs by shortening the processing time, repeatability and precision

Passion, innovation, experience

Seron is...

## DESIGN DEPARTMENT - OUR OWN KNOW HOW

All machines are designed and programmed by our specialists.

## RESEARCH AND DEVELOPMENT DEPARTMENT

All solutions before implementation for production are subjected to demanding tests.

## AUTOMATION DEPARTMENT

Automation department is made up of engineers with many years of experience. We use the highest quality components from reliable suppliers.

## SERVICE

We have our own independent team of highly qualified service technicians and an extensive car fleet. Thanks to this, the service response time is maximally shortened.


## PRODUCTION HALL

We have extensive technical facilities, allowing you to build machines from the base. Thanks to this, we are flexible and maintain the highest quality.

## ASSEMBLY HALL

Each stage of production is close with a detailed quality audit. This ensures the highest precision and reliability of machines.

## WAREHOUSE

We have a richly stocked warehouse. Thanks to this, we have minimized the waiting time for machines.


The goal of our activity is not only to sell machines, but also to take care of long-term relationships with customers by providing: the highest quality, reliable, precise devices and support of experienced programmers, technicians, as well as service engineers. Acting as a recognized manufacturer of CNC machines, we set the following goals:

- Innovation of applied concepts
- Comprehensive approach to the customer
- Reliability in business


Our company are people. Their experience, openness, creativity and courage in ideas that makes us achieve such rapid technological progress. We have our own research and development unit. We are also cooperating with research institutions. Thanks to these activities, we create devices that are innovative on a global scale, adapted to the increasingly high demands of clients and international standards. We build numerically controlled machine tools from the base using selected components. Each production stage closes with a detailed quality audit, which ensures high precision and reliability of products from our offer.

# Production

# Production

# CNC MILLING MACHINES

**Specialized Machining Centers** are machines dedicated to selected industries such as industrial, furniture, carpentry, foundry or advertising. It has been configured based for many years of experience in providing solutions best suited to various industries.

CNC milling machines

# BeamCenter

# B e a m C e n t e r

Industry 4.0



- CNC in the concept of industry 4.0
- modern real-time control systemem
- dynamic analysis using the EtherCat protocol
- comprehensive machining by electro spindle and aggregates
- beam table in any size of the working area
- comprehensive monitoring of key components
- remote technical and service support

Machining Center with a beam table is solution designed and created for requirements in the furniture industry as well as joinery or stairs. The construction is based on a solid steel, welded and relieved body, which can be made in any size of the working area. The machine gate is made of composite materials with double-sided drive allows for high dynamics and speed while maintaining stability which allows for the highest quality final elements and excellent production efficiency. Special construction and modern safety systems allow access to the machine during processing without any risk to the operator. Tool magazine is located on the gate and allows the tool to be changed immediately when the cabin is moved. In addition, the center can be equipped with linear magazines with holders up to 76 tools, which will allow effective work even in various machining strategies.

The machine table is equipped with universal beams with mounted vacuum blocks and positioners that facilitate correct location and assembly of the material. The center can optionally be equipped with a belt conveyor for removing dust and cuts, it also has extraction feet for dedusting: the first located around the electric spindle, among others angular aggregates and the extraction foot for the drilling aggregate. Thanks to these solutions we are able to ensure maximum cleanliness of the processed products and the plant in which the machine is used for.

The machine control is easy to use and has an intuitive and functional interface. The beam machining center was designed and made in the concept of Industry 4.0, which allows for remote monitoring of the machine's operating parameters in order to optimize its operation as well as reduce operating costs.

| Series | Size of working area [mm] | | Z axis [mm] | Max speed drive [m/min] | Spindle power [kW] | Number of tools in the magazine | Drilling aggregate | Rotational speed [obr/min] | Belt dust extraction | Remote access |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | V | P | | | | | |
| Beam Center | 1300, 1600, 1900 | 2500-12000 | 200-500 | up 100 | 6,6 - 20 kW | rotary - 24<br>linear - 76 | yes (various configurations) | 24000 (3600, 45000) | yes | yes |

CNC milling machines

# ProROBOTic 4.0

# ProROBOTic 4.0

Industry 4.0



- CNC in the concept of industry 4.0
- modern real-time control system
- dynamic analysis using the EtherCat protocol
- automated loading and unloading system
- comprehensive monitoring of key components
- innovatively made construction
- flexible configuration
- remote technical and service support

The PRO ROBOTic 4.0 Machining Center is a center built in accordance with the concept of Industry 4.0. The configuration of the machine allows to be implemented in an extensive, automated machine park, but it will also be perfect equipment for a small carpentry workshop. It guarantees efficient work supervised by a maximum of one operator, whose role is limited to delivering the pallet of details to be processed to the place of material collection by the robot and collecting ready palletized fabrications. The center allows to reduce human resources, optimize production costs and has a significant impact on even higher quality of products.

The machine was designed based on the construction of the highest series machines, the PRO line. The machine construction made of welded steel elements is ribbed and enriched with composite additives, then it is subjected to the process of annealing and machining with one fastening. The innovative construction of the machine's carriage support based on a steel, also ribbed construction, combined with elements made of light metals and composites allows for high dynamics as well as operating and speed resulting in maximization of the machine's efficiency.

The machine control is equipped with intuitive solutions, which makes operation simple, while the interface is easy and legible. The operator can track the progress of the process in real time and adjust machining parameters.

The used communication protocols allow remote software update as well as service access and correction of parameters not only of the main control, but also of all key machine components such as electrospindle, inverters and valve terminals. In addition, technicians have the ability to monitor the status of major components in real time and have access to reporting histories. This allows you to reduce service visits by up to 70%, which also minimizes machine downtime.

| Series | Size of working area [mm] | | Z axis [mm] | Max speed drive [m/min] | Spindle power [kW] | Automatic tool exchange | Number tools in the magazine | Liquid C axis for angular aggregates | Units angular | Positioning bases for nesting and machining on blocks vacuum | Remote access | Vacuum blocks for vacuum table |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | V | P | | | | | | | |
| Pro Robotic 4.0 | 600-3000 | 900-6000 | 300-1000 | 120 | 8-18 | yes | up to 50 | yes | yes | yes | yes | yes |

CNC milling machines

# Nesting

# Nesting

Industry 4.0



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- a professional center for cutting chipboard, MDF, laminated
- working area with a size of 2100 x 3100 mm
- the equipment used allows preparation of ready-made formats for assembly intelligent
- subsystems
- remote technical and service support

The equipment allows preparation of ready-made formats for assembly. Intelligent sections - remote Machining center for nesting is used wherever automation of large-format plate processing is valued. The machine tool is great for cutting boards, but also for horizontal and vertical bores and production of furniture fronts. The machine is standard equipped with a sectional vacuum table, thanks to which the material fastening time is kept to a minimum. The use of positioning bases facilitates the positioning of the material always in the same place on the work table. The machining center can be extended with additional options such as drill chillers or a material pick-and-place system, thanks to which the customer gains additional automation. Dedicated to the machine software for graphic design of furniture with its own library, it allows automatic conversion of ready furniture blocks into files for cutting and nesting, including bores and undercuts.

**Available accessories**

- linear and revolver tools store
- service of angle aggregates and saws
- positioning camera
- laser scanner
- measure probe
- positioning bases
- central lubrication system
- installation of a extraction system
- remote service
- scanner

| Series | Size of working area [mm] | | Z axis [mm] | Max. speed of trips [m/min] | Nominal spindle power [kW] | Power drill aggregate [kW] | Number of tools in the drilling aggregate | Number of tools in the magazine | Option of the input and output system |
|---|---|---|---|---|---|---|---|---|---|
| **Standard** | 2100 | 3100 | 300 | 60 | 5,5 | inaccessible | inaccessible | 8, 12, 20 | no |
| **Expert** | 2100 | 3100 | 300 | 80 | 8 | option | 5 | 8, 12, 16, 24 | yes |
| **Pro** | 2100 | 3100 | 300 | 120 | 13 | option | 9 | 8, 12, 16, 24 | yes |
| **ProNest** | 2100 | 3100 | 300 | 80 | 15 | 2,2 | 9 option 36 | 12, 16, 24 | yes |

CNC milling machines

# ProNest



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- a professional center for nesting plates expanded with a plate feeder and a receiver box
- operation of machines by a single operator
- automatic cutting, bores and recesses
- the possibility of labeling formats
- intelligent sections
- remote technical and service support

The ProNest automated machining center is dedicated to the furniture industry producing box furniture as well as upholstered furniture. The machine with a pick-and-place system is designed for cutting and vertical boreholes, among others wood-based panels. In the standard configuration, the center has a working area of 2100 mm x 3100 mm, which has been adapted to the standard size of the furniture boards, which allows you to machine the material without additional cutting.

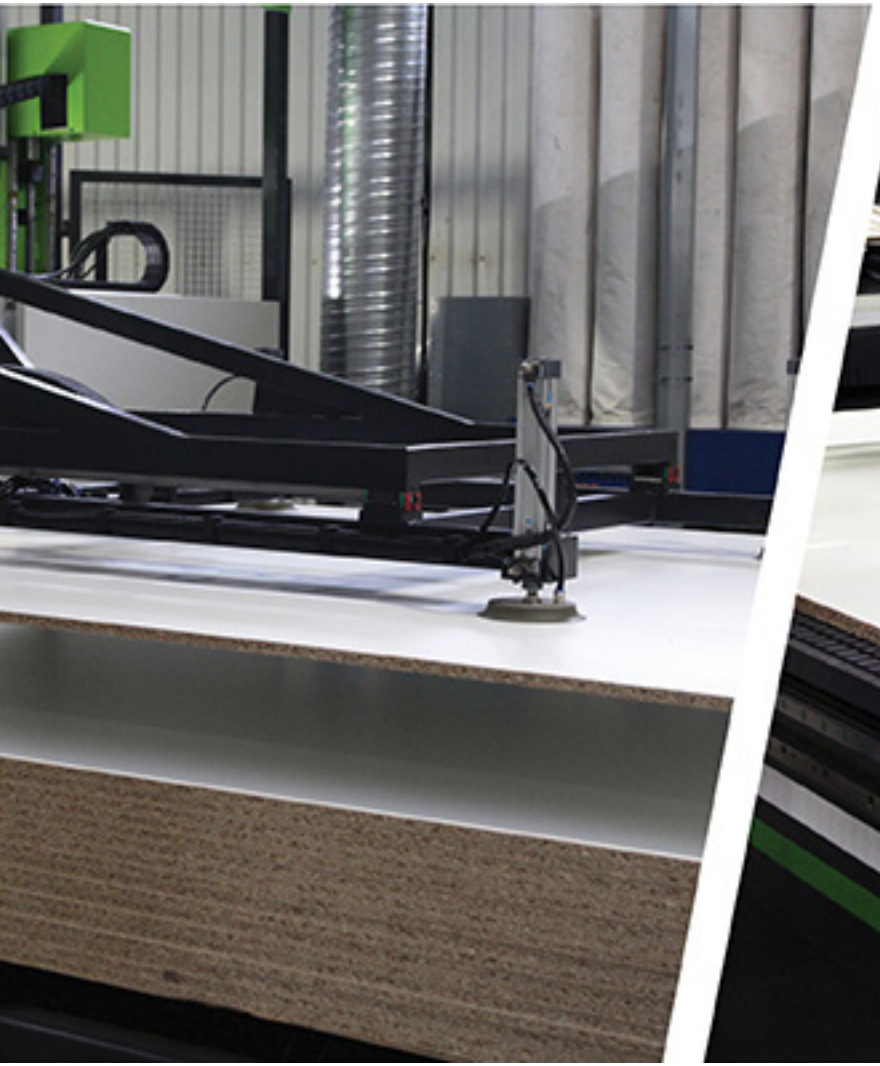
Elements automating the production process are: intuitive furniture design software enabling almost immediate nesting of elements on the material, pick-and-place system, main electro-spindle with a capacity of 15 kW, 12-position tool magazine, and 9 drilling heads. Thanks to this configuration, work with panel cutting is completely automated, which allows for overall efficient material processing with one operator. ProNest starts working when the full range of furniture boards goes to the feeder, then the individually picked plates are transferred to the work table, where the machining process takes place. After the operation, the ready-made forms are transported to the receiving table. During this process, the automatic extraction system collects dust residues after the machining process. The receiving system is equipped with a material sensor, which stops the conveyor belt in a suitable position, which allows the operator to freely remove ready-made formats. The machining center at this time performs operations on the next board.

The undisputed advantages of the ProNest machining center are:

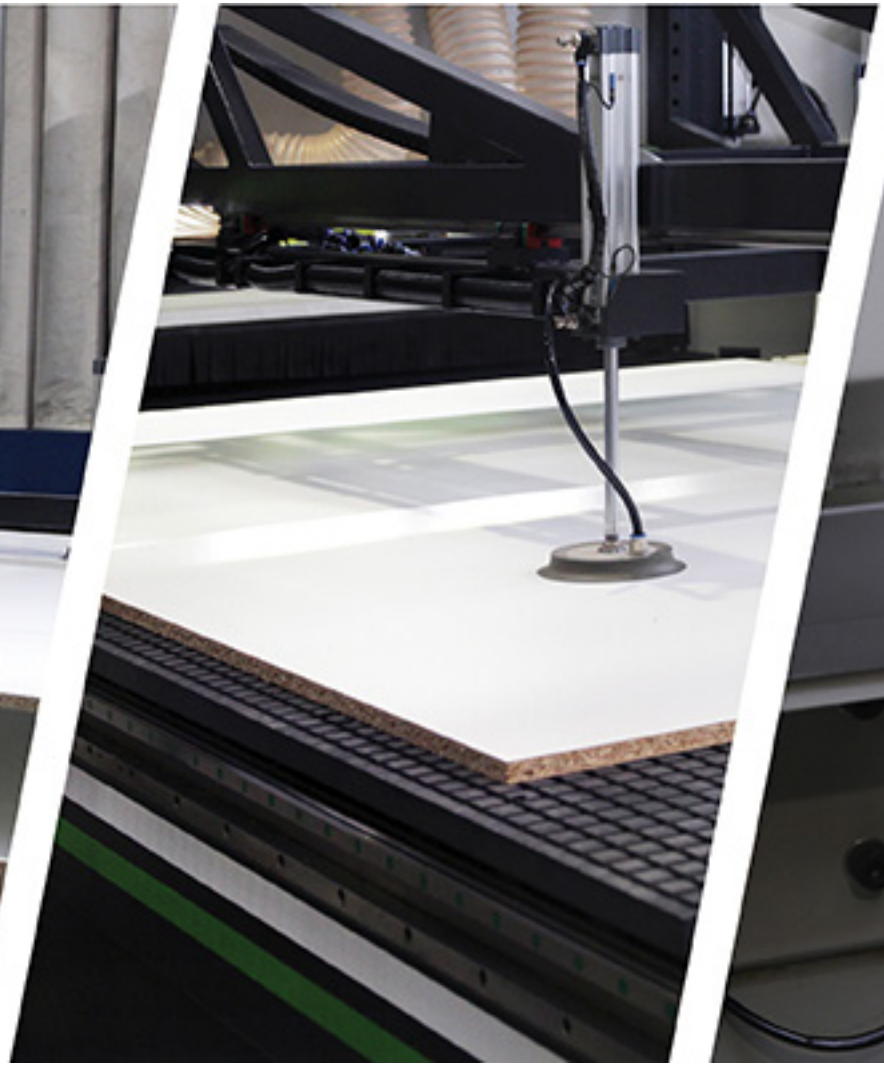
- advanced, easy-to-use software with a base of furniture, enabling visualization and nesting,
- reduction of employee (material) costs,
- automation of the production process,
- significant increase of production capacities,
- intelligent separation of vacuum sections,
- high repeatability.

The SERON ProNest CNC Machining Center is ideally suited to the nesting of furniture boards, the production of furniture fronts as well as the processing of plywood, chipboard, solid wood and plastics.

| Series | Size of working area [mm] | Z axis [mm] | Speed drive [m/min] | Spindle power [kW] | Spindle rotation [rpm] | Power drill aggregate [kW] | Number of tools in the drilling unit | The number of tools in the magazine | The option of the input and output system | Weight [kg] | Dimension [mm] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ProNest** | 2100 x 3100 (option 2100 x 4100) | 300 | 80 | 15 | 24 000 | 2,2 | 9 (option to 36) | 12, 16, 24 | yes | 6000 | 11500 x 4000 x 2800 |



A pneumatic plate pickup system transports material from the infeed table.



The downloaded plate is placed in the working area.

The downloaded plate is placed in the working area.

The machining center performs the nesting and drilling process.

The ready-made forms are transported to the receiving table. During this process, the automatic extraction system collects dust residues after the machining process.

The receiving system is equipped with a material sensor, which stops the conveyor belt in a suitable position, which allows the operator to freely remove the ready-made formats.

# CNC milling machines

ProNest

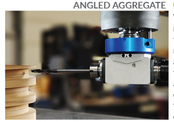
## DRILL AGGREGATE

is a great tool for quickly making holes in the material, because each drill is controlled independently. This option works well in the carpentry and furniture industry, where the speed of drilling is the most important. The use of drilling aggregates significantly improves the hole making process - because it does not require the machine to travel to the tool magazine. Drill aggregate has up to 26 drill holders, in the "L" system, spacing of 32 mm, it is possible to equip the machine with drill units with a greater number of vertical and horizontal tools, can drills of various diameters and a circular saw for cutting furniture bodies in the axis X and Y.

## REVOLVER TOOL MAGAZINE

Standardly placed on the plotter's gantry(it is possible to mount it together with the X axis). The advantage is the automation of the machining process, eliminating operator errors and speeding up the work. The tool change takes place faster than in the line magazine due to the shorter distance from the workplaces.

## ANGLED AGGREGATE



We use angle aggregates from renowned manufacturers. The most popular tool in this category is a single-sided aggregate with a manually adjustable angle (or digital display), adapted for drilling operations and milling in the material from the side. It is possible to adapt the aggregate for assembly of saws. We offer a variety of aggregates: two-sided and four-sided. The aggregate can operate on machines equipped with a vacuum table with vacuum blocks.

## SUSPENSION VESSELS

Vacuum blocks are used to attach the material on a raised surface for further processing with angle or drill chuck from the side. Depending on the details to be processed, we can choose their appropriate height and size.

## AUTONESTING

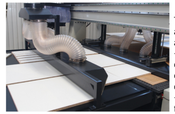
The selection of appropriate CAD / CAM software has a significant impact on the automation of production processes. We recommend dedicated software that improves the process of cutting boards. The functions included in the software provide a high level of control for individual types of operations. It enables immediate optimization of work.

The program includes, among others:
- nesting, which minimizes material waste quick cutting of details; - a full set of 2D, 2,5D tools;
- control of directional line layers and design grids;
- text editing and single fonts for engraving;
- file import - DWG, DXF, EPS, AI and PDF;
- image import - BMP, JPG, TIF, GIF;
- the ability to add vectors to images;
- V-bit cutting / engraving;
- 2D profiling with interactive tabs, bridges and a ramping option;
- pocket cutting with multitools;
- drilling with the option of deep holes;
- preview of the tool path in many colors.

## CONTROL SYSTEM

High-class CNC control system is an industrial real-time controller. The controller has advanced interpolation algorithms (dynamic coordinate analysis), ensuring the best quality of machining even in difficult conditions - guaranteeing stable and smooth operation of the machine even during untypical and complicated machining. The controller gives the possibility of using six working bases (G54-G59) and the function of ending the work started after the supply voltage failure. An additional advantage of the device is the option thanks to which the plotter is able to return to the starting point after each project. The control systems dedicated to the ProNest machine are intuitive and easy to use.

## OUTFEED SYSTEM

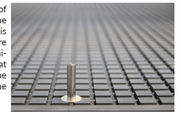


The system of the receiving conveyor belt along with the draw-dusting beams operates as follows:
- after performing the nesting and hole / bore operations, the beam pushes the elements onto the receiving table and at the same time dedusting them;
- the belt receiver takes ready-made items from the work table,then transports them to the end of the receiving table, making it easier for the operator to pick up the items for storage. A photocell placed at the end of the receiving table protects the parts from uncontrolled sliding;
- at the end of the receiving table there is a chute in the form of a hopper, to which we connect hose suction which ensures final chip removal;
- the receiving table fits the full dimension of the workpiece 2100 x 3100 mm on its surface, thanks to which the system releases the surface on the work table to place another processing plate on it.

## DUST EXTRACTION SYSTEM

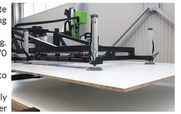
Dust extraction system is a solution that:
- at each stage of the machine operation will ensure efficient and effective collection of sawdust and dust. We offer a complete extraction system with intelligent control at the following machine modules:
- electrospindle (pneumatic extraction foot), ensures effective extraction when nesting,
- drill aggregate (suction foot), ensures effective extraction at bores and holes,
- cleaning and scraping beam , ensures effective removal of the material from the working field and cleans the space for the next wood-based board, - dedusting beam in front of the receiving table, ensures the extraction of dust before feeding the details to the receiving tape,
- chute at the end of the receiving tape, providing final dust removal.

## INTELLIGENT VACUUM SUBSYSTEM



The intelligent system reads the position of the spindle, which automatically opens the vacuum sections of the subsystem. This function is synchronized with the software and is especially recommended when machining small parts. The material is maintained at maximum efficiency by distributing the vacuum on the smaller surface area of the section.

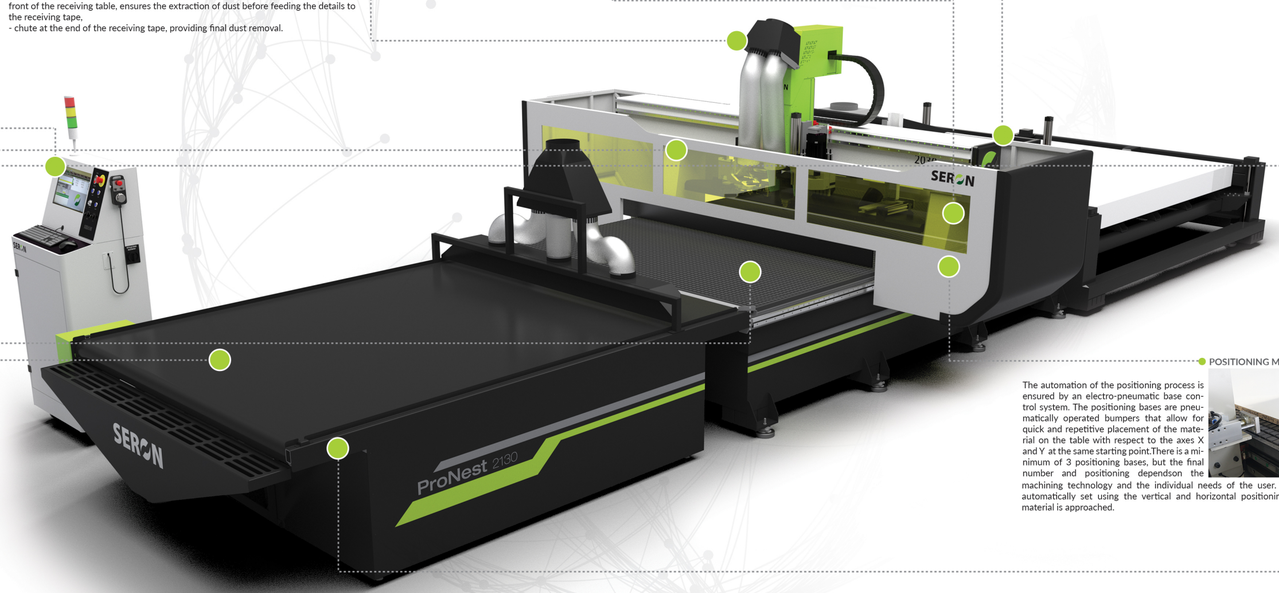
## INFEEDING SYSTEM



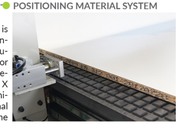
Infeeding table with an automatic plate pickup system equipped with a positioning system on the work table:
enables easy loading of the entire pallet (e.g. MDF, chipboard) in a standard format (2070 x 2800 mm) using a forklift;
- load capacity of the feeding table up to 3000 kg;
- after loading, the plates are automatically positioned to the appropriate height, after which they are transferred to the work table by means of the plate pickup system.

## SERON WOP SOFTWARE

Seron WOP software gives you the ability to create programs using predefined functions, macros, contours, milling and drilling. It is dedicated to 3 axis machining. It has the ability to import .dxf files and generate data to the postprocessor. The system enables machining such as milling, drilling, pocket milling, text milling, contour milling, tool administration.
This software allows graphic representation of the material and simulation of machining steps with tools assigned to the operation. In addition, it has a postprocessor to transform neutral FMC files into the required control format.
Seron WOP includes Nesting with the following features:
· Very fast, automatic generation of nesting results,
· Drag & Drop option from Microsoft Windows
· Optimization of rectangular and any shape elements on raw panels,
· Waste management,
· Grouping of items from the order by their thickness or type of material,
· The ability to manually edit nesting results,
· Calculating the number of raw boards needed,
· Automatic generation of CNC codes without manually adding paths,
· Automatic adding technology,
· Possibility of parametric editing of nesting elements dimensions,
· Individual settings for each nesting element, e.g. step of possible rotation angle or grain angle,
· The possibility of setting individual types of arrivals and departures of tools,
· The program adjusts the steps of arriving and departing from the tool,
· Adjustable in accordance with the requirements: distance between paths (cutter width), min./max. number, priority, grain direction, edge alignment, raw element contour, angle of rotation and stride length, min./max. element size.
The WOP Seron includes the Nesting import .xls / labels function:
· Dxf files import with automatic adding of machinings - drilling, milling,
· Import orders from ERP / PPS systems (import of Excel and Csv files),
· Printing bar codes (labels),
· Printing nesting lists (demand, summary)
· Feed speed depends on the type of material,




## POSITIONING MATERIAL SYSTEM



The automation of the positioning process is ensured by an electro-pneumatic base control system. The positioning bases are pneumatically operated bumpers that allow for quick and repetitive placement of the material on the table with respect to the axes X and Y at the same starting point.There is a minimum of 3 positioning bases, but the final number and positioning dependson the machining technology and the individual needs of the user. The furniture panel is automatically set using the vertical and horizontal positioning bases to which the material is approached.

## LABELS

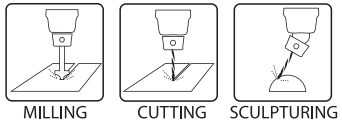
Label printers are an element of automatic identification systems. They are used to print bar codes, markings or information in the form of graphics or text. After nesting, the operator sticks them on cut elements. To read the information contained in the label, code readers are used that allow quick scanning. This solution already contributes to the optimization of working time both in warehouses and assembly halls in many production plants.

CNC milling machines

# 5-Axis

# 5 - A x i s

Industry 4.0


- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- a new generation of high-tech CNC machine tools, high-precision,
- fast and trouble-free machines of the highest class,
- components ensuring efficient and accurate work,
- connection designed to work on creating 3D elements, models, thermoforming molds, etc.
- remote technical and service support

The new generation of 5-axis machines are innovative solutions for companies that make models, forms for thermoforming, laminating and casting, sculptures, blanking dies and all kinds of 3D elements. Thanks to the work with the tilt and turn spindle giving us the possibility of working in axes A and C, the machine can make complicated details several times faster than 3 or 4-axis machine tools, and implement projects impossible to implement on simpler machines. The 5-axis machine series is characterized by high precision, dynamics and speed of work. Ergonomic design consisting of a fixed table and a mobile gate ideally suited to the processing of complex spatial solids requiring high precision, used, for example, in the automotive or aerospace industries. The whole structure is made of solid, ribbed and welded steel elements.

The high correctness of the machine geometry is guaranteed by precise machining from one fastening, previously relieved construction with a weight of up to 30 tons. The guarantee of failure-free operation was achieved thanks to the use of the highest quality components. Active tool edge endpoint control in 5 axes (RTCP) or simultaneous machining capability is possible thanks to the use of a modern real-time control system with dynamic trajectory analysis and an Ethernet link that allows remote control of machine parameters. Thanks to this, the machine enables complete automation of the production process. Despite the use of highly advanced solutions, the control is intuitive and user-friendly. Materials dedicated for machining on a 5-axis machining center include: aluminum, composites, plastics, resin, wood and wood-based materials, etc.

| Size of working area [mm] X | Size of working area [mm] Y | Z axis [mm] Z | Max speed drive [m/min] | Spindle power [kW] | Tool magazine | Number of tools in the magazine | Tool sensor utility | Table | Closed electro-spindle liquid cooling system | Cooling tool | Weight [kg]* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 - 3000 | 2100 - 6000 | 200 - 1500 | X,Y do 45 m/min.<br>C,A do 6000 deg./min. | 8 - 24 kW | linear or pistol magazine, | up to 50 | yes | T-slotted solid steel or raster vacuum | yes | option | 6000 - 30 000 |

*may vary depending on the equipment options;

CNC milling machines

# HardLine



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- steel ribbed construction with a high vibration damping coefficient.
- the machine is designed for milling demanding materials.
- solid steel t-slot table
- effective tool cooling
- 12 position tool magazine (option up to 70 tools)
- software for designing multiple machining strategies,
- the possibility of equipping the machine with additional options, obtaining a multifunctional device.
- remote service

Machines from the HARDLINE series are professional devices designed for companies producing, among others: foundry molds, injection molds, pressure molds, model plates, prototypes, plastic details, dies, punches, pressers, blanking dies, etc. Rigid construction and the use of the highest class subassemblies give the certainty of high efficiency and long-term trouble-free operation. The machine can be extended with additional equipment and further increase its efficiency and versatility. The machine is standard equipped with a steel or aluminum t-groove, which ensures stable material fastening.
The device can be equipped with options such as: bathtub table, closed liquid cooling system, cooling with oil mist, freezing nozzle. Due to such an extension, the client obtains a multifunctional device that gives huge machining possibilities. We also provide design software with many machining strategies. It allows you to automatically convert finished projects into machine files.

**Available accessories:**

- scanner,
- tool cooling
- measuring probe,
- C-axis,
- angular aggregates and saws,
- positioning bases,
- turret storage,
- central lubrication system,
- aluminum T-grooved table
- or steel T-grooved table,

| HardLine | Size of working area [mm] | | Z axis [mm] | Max speed drive [m/min] | Spindle power [kW] | Automatic tool exchange | Number tools in the magazine | Closed electro spindle liquid cooling system | Cooling with oil mist |
|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | V | P | | | | |
| Pro | 600-3000 | 900-6000 | 300-1000 | 120 | 8-25 | yes | up to 50 | option | yes |

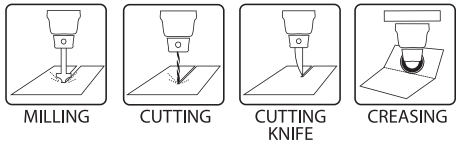
* may vary depending on the equipment options; ** dimension does not include control cabinet; other customized machine configurations

CNC milling machines

# AdMaker

# AdMaker

Industry 4.0


- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- rigid construction combined with top-class components.
- confidence of high efficiency and long-term trouble-free operation.
- a multi-tool center for machining a wide range of materials.
- gold medal in the price competition for innovation.
- remote technical and service support

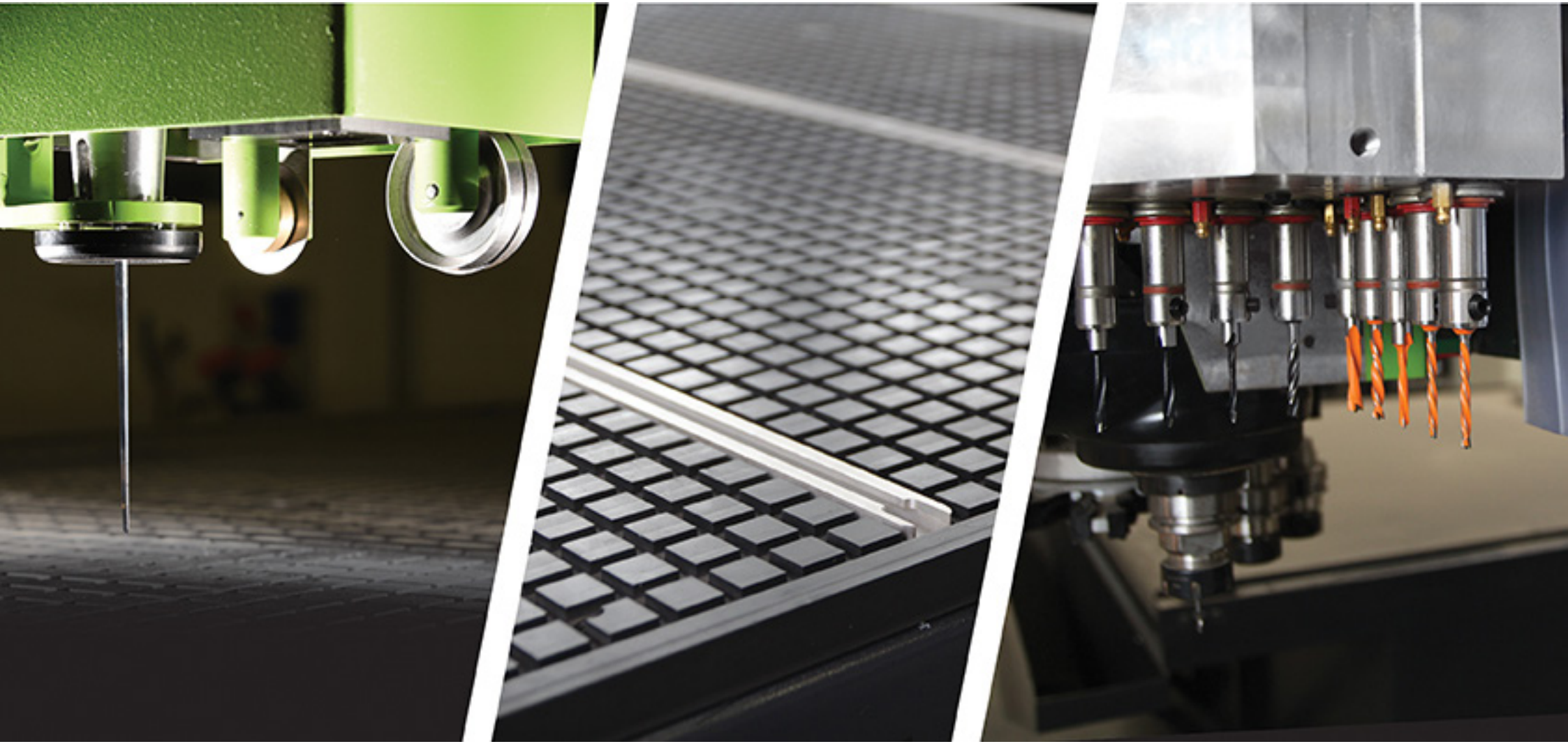
AdMaker is a multifunctional Machining Center dedicated to enterprises focusing on automation and minimization of production costs. The machine is designed for processing materials used, among others in the production of advertising elements, packaging, gaskets, foundry molds, and for the cutting of textiles, e.g. in the sewing and upholstery industry. Top-class tools, such as the oscillating knife module or professional electro-spindle, which AdMaker is equipped with, allow high-performance machining of a wide range of plastics, leaving clean and smooth edges. The positioning camera and the possibility of fast and simple clamping of the material on the vacuum table facilitate the precise processing of small formats. Thanks to all the tools that AdMaker has been equipped with, we obtain a multifunctional device that gives us huge processing possibilities.

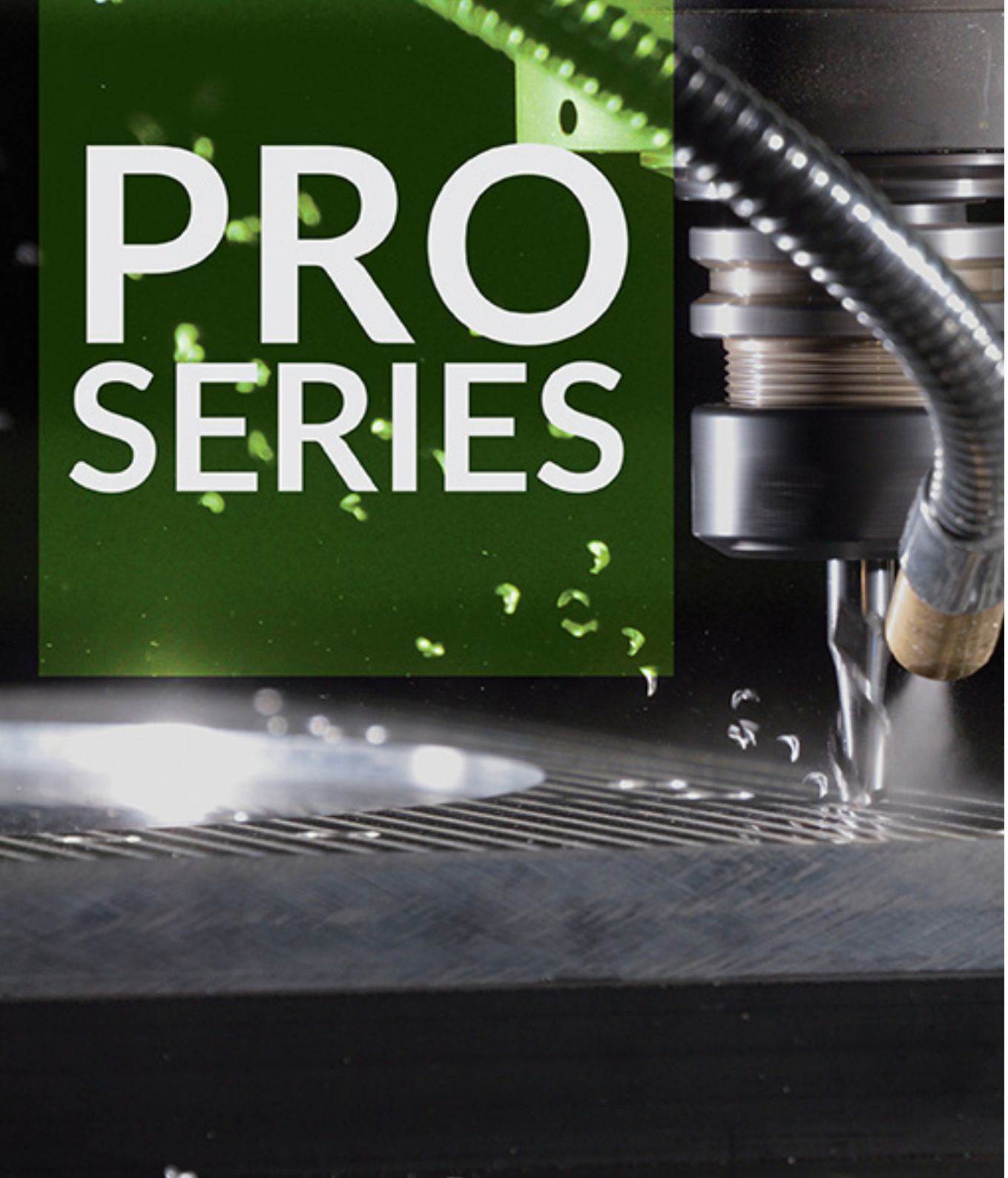
**Available accessories:**

- tool cooling
- scanner
- positioning bases
- angle aggregate
- central lubrication system
- chip extraction system

| AdMaker | Size of working area [mm] | | Z axis [mm] | Max speed drive [m/min] | Active oscilation knife | Roller knife | Passive knife | Creasing head | Pen head | Positioning camera |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | | | | | | | |
| **Expert** | 1500-2500 | 2000-6000 | 300-700 | 80 | yes | yes | option | yes | option | option |

* may vary depending on the equipment options; ** dimension does not include control cabinet; other machine configurations available on request





# PRO SERIES

**The Pro Series** are flagship machines in the SERON offer. They are characterized by the most massive and rigid construction and professional control, thanks to which they guarantee high precision and machining efficiency. Milling centers of the Pro series allow the largest expansion range with additional equipment.

CNC milling machines

# Pro series



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- the highest quality product for professional applications
- high rigidity of the structure and top-class components ensure efficient and precise work
- main features: easy of use
- speed up to 120 m/min
- remote technical and service support

The Pro Series machines are flagship products characterized by the stiffest and heaviest structure on the Seron milling plotters offer. They are efficient and precise and equipped with friendly CNC control systems. They are efficient and precise and equipped with friendly CNC control systems. Each CNC machine forming part of this line has a welded ribbed steel body, reinforced structurally, enabling precise machining of demanding materials also with the use of high-power spindles and tools with large diameters. The innovative drives used allow for precise work with high dynamics. All machine elements from mechanical to control electronics have been carefully selected. Thanks to this, we gain fast, reliable machining centers with high precision positioning at the level of 0.01 mm. These machines offer great expansion possibilities. They can optionally be equipped with a drilling unit, a positioning camera, an active oscillating head with accessories, a greater number of axes, and many more.

**Available accessories:**

- any size of the working area (max size 3000 x 12000 mm)
- automatic head of an active oscillating knife, disk, creasing machine, pen, etc.
- video- positioning system
- t-slot table, vacuum, hybrid
- solid steel or aluminum table
- aggregate angular (side-to-side milling or undercut sawing operations)
- tilting spindle
- rotary axis on the table
- tool magazine, revolver or linear scanner
- drilling unit
- positioning bases
- cooling of the tool in the form of cooling mist
- freezing nozzle or closed liquid cooling system
- intelligent vacuum sections,
- central lubrication system
- swarf extraction.
- probe
- monitoring key components

# EXPERT SERIES


**The Expert** series are high-class CNC machining centers, which are perfect equipment for enterprises focusing on optimization of production costs while maintaining the highest quality of machining.

CNC milling machines

# Expert Series



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- high quality product for professional use.
- Polish product (design, production, service)
- steel, ribbed and rigid construction
- high-quality components
- easy of use
- speed up to 90 m/min
- remote technical and service support

The Expert series is high-class CNC machining centers that will prove to be a part of the equipment of production plants, prototyping, electronic factories, carpentry plants, advertising companies. Machines in this series allow you to achieve speeds up to 90 m/min, meeting the expectations of even the most demanding users. The control system means that the device can be operated by both experienced and novice operators. Expert series machines are built on the basis of a rigid welded, ribbed steel structure, which is relaxed and machined from a single mounting on a large-format machining center.
The machine in the basic configuration is equipped with servo-drives, which ensure fast and precise machining. The series is dedicated to electro-spindles with power up to 12 kW and rotational speeds up to 50,000 rpm, in the ISO30 or HSK63 tool fastening standard. These electro-spindles allow automatic tool changing, thanks to which production of parts requiring the use of several tools becomes much faster. The machine has a high positioning precision of 0.01 mm.

**Available accessories:**

- any size of the working area (max size 2550 x 6100 mm)
- tool cooling
- rotary axis mounted on the table
- hybrid t-slot vacuum table, steel, aluminum
- automatic head of an active oscillating and circular knife, creasing machine, pen, etc.
- positioning camera
- tool magazine ( revolver or linear)
- positioning base
- scanner
- fluid C axis for angle aggregates and saws
- intelligent vacuum sections
- central lubrication system
- chip extraction system
- probe
- monitoring key components


SIREN

# STANDARD SERIES

**CNC milling plotters from the Standard series** are modern and economical machines for precise machining of a wide range of materials. They are dedicated to growing entrepreneurs who are just entering the CNC industry, but they are great as a supplement to existing machinery parks.

CNC milling machines

# Standard Series



- modern real-time control system
- dynamic trajectory analysis using the EtherCat protocol
- polish product
- rigid steel construction
- top-class components
- intuitive operation
- easy of use
- travels up to 60 m/min
- remote technical and service support

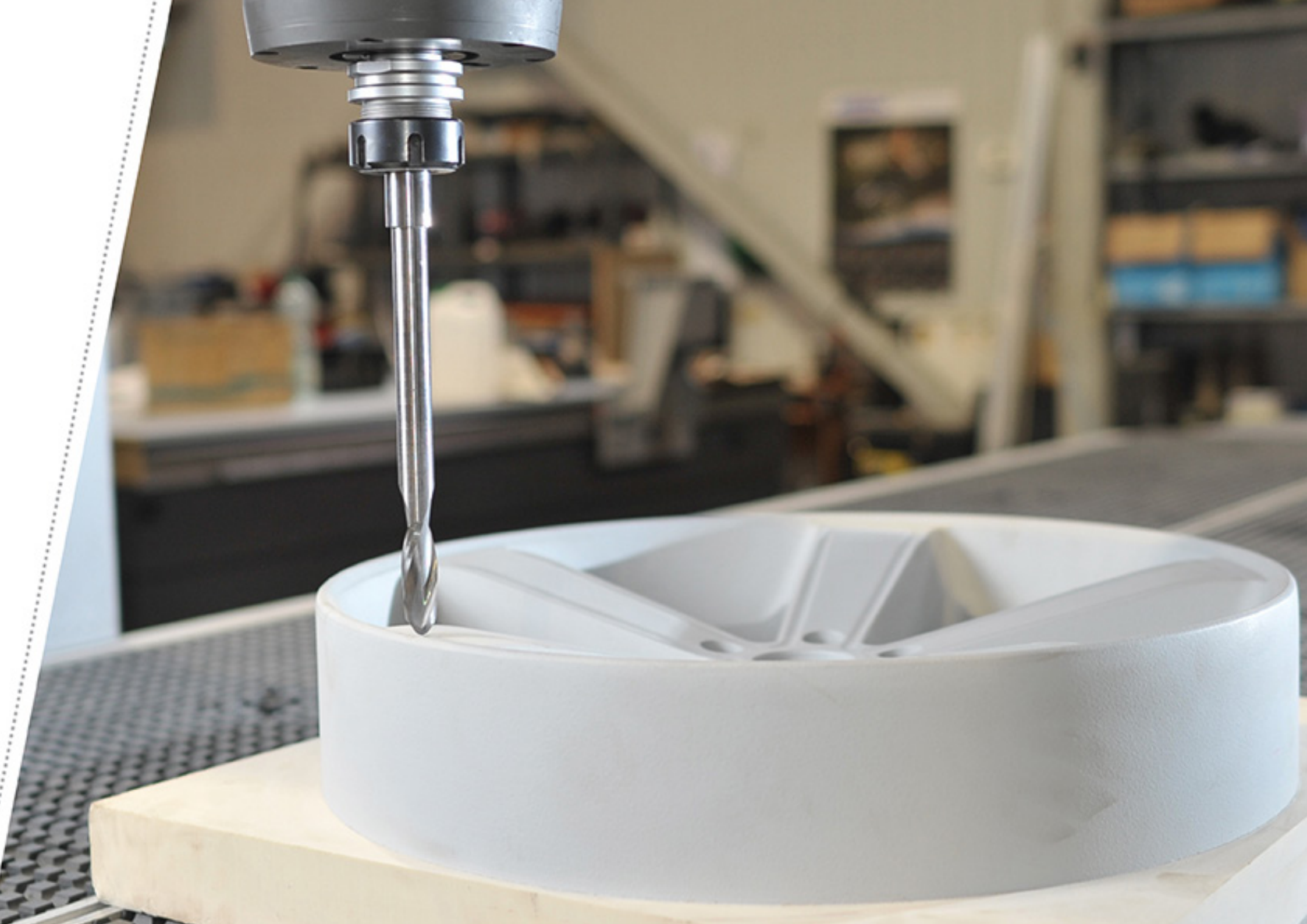
CNC standard milling plotter is a modern machine for precision machining of a very wide range of materials. The design of the machine tool is made in the technology of high-quality welded steel, then annealed and subjected to precision machining on a large-format machining center. Every important structural element, such as a bed, gate supports, Z axis are ribbed, which ensures very high rigidity and resistance to machining resistance and excellent vibration damping. Drives that were used in each axis ensure high speeds and work dynamics. Standard milling machines use professional brushless milling spindles, air or liquid cooling, powered by an inverter. Bearing with trapezoidal rails guarantees precision and reliability. Used industrial bearings ensure low noise even at high speeds and great durability. Positioning at 0.02 mm.

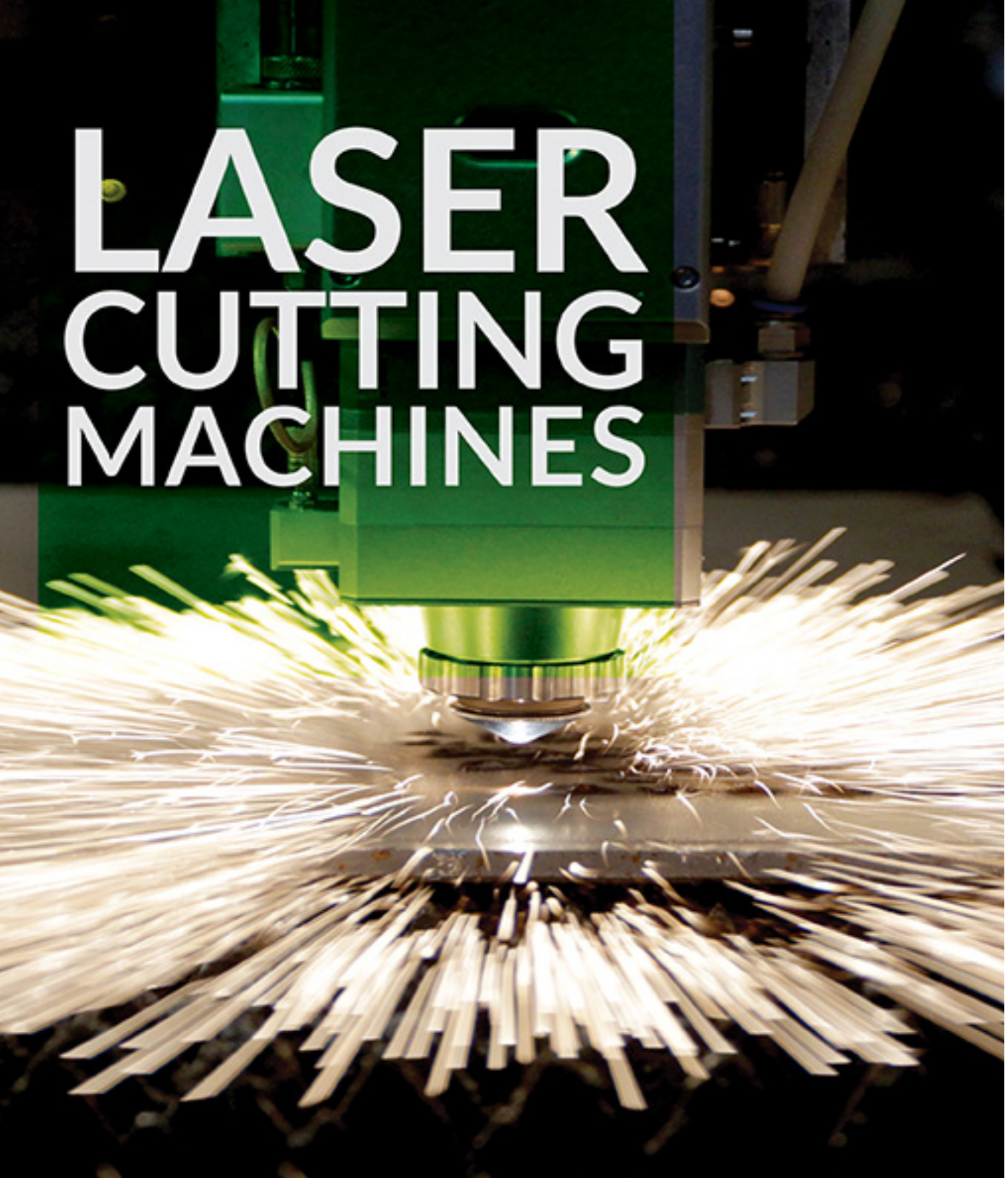
**Available accessories:**

- any size of working area (max size 2100 x 5100 mm)
- automatic head of an active oscillating knife or roller, creasing machine, pen, etc.
- video-positioning
- table t-slot, vacuum, hybrid,
- positioning base
- scanner
- cooling of the tool in the form of cooling mist, freezing nozzle or closed liquid cooling system
- chip extraction system
- probe
- monitoring key components

# Comparison of the Series

| | Pro | Expert | Standard + |
|---|---|---|---|
| ?o r?ing area | from 600 x 900 mm to 3000 x 12000 mm | from 600 x 900 mm to 2550 x 6100 mm | from 600 x 900 mm to 2100 x 6100 mm |
| Gantry clearance and Z-axis range | 300 ? 1000 mm | 300 - 500 mm | 200 - 300 mm |
| Drives | X, Y axes: helical hardened ground, class 6 (option class 5)<br>Z axis: TBI ball screw, class 5 | X, Y axes: helical hardened ground, class 6 (option class 5)<br>Z axis: TBI ball screw, class 5 | helical X, Y, Z |
| Motors | AC servo, AC servo High speed 24 bit | AC servo, AC servo High speed 24 bit | servo AC |
| ?inear bearing | trape?oidal rails, pre-drivable Hiwin trolleys, class H | | trape?oidal rails, pre-drivable TBI trolleys, class H |
| | 25 mm | 25 mm | 20 mm |
| Speed of travels | up to 120 m/min | up to 90 m/min | up to 60 m/min |
| EtherCat | yes | yes | yes |
| Program resolution | 0,0025 | 0,0025 | 0,0025 |
| Positioning accuracy | 0,01 mm | 0,01 mm | 0,02 mm |
| Double-sided gate operator | yes | yes | yes |
| The power of the spindle | up to 25 kW | up to 15 kW | up to 7,5 kW |
| Maximum spindle rotation | 24000 obr/min (option 6 000, 18 000, 40 000, 50 000) | 24000 obr/min (option 6 000, 18 000, 40 000, 50 000) | 24000 obr/min (option 6 000, 18 000, 40 000, 50 000) |
| Electric spindle inverter | yes | yes | yes |
| Brushless electro-spindle | yes | yes | yes |
| Tool holders | HSK63 (option ISO30 ER32) | ISO30 ER32 (option HSK63) | ER20/ER25/ER32 (option ISO30 ER32) |
| Construction | ribbed, steel, welded, annealed, precision machined | ribbed, steel, welded, annealed precision machined | steel, welded, annealed precision machined |
| Tool ?aga?ine | up to 70 linear positions (revolver option) | up to 50 linear positions (revolver option) | option up to 24 linear positions |
| Tool height sensors | precision 0?005mm | precision 0?005mm | optional 2 items |
| Postpone?en t | planetary gears | | |
| | ? 1?acrmin | ? 1?acrmin | < 5' acrmin |
| Types of tables | - T-slotted solid steel<br>- T-slotted solid aluminum<br>- T-slotted profile<br>- vacuum<br>- hybrid | - T-slotted solid steel<br>- T-slotted solid aluminum<br>- T-slotted profile<br>- vacuum<br>- hybrid | - T-slotted solid aluminum<br>- T-slotted profile<br>- vacuum<br>- hybrid |
| Cooling tools | - oil mist<br>- fro?en air<br>- li?uid in a closed system | - oil mist<br>- fro?en air<br>- li?uid in a closed system | - oil mist<br>- fro?en air |
| Tool ?aga? ine | - linear<br>- revolver | - linear<br>- revolver | - linear |
| ?n ife head | active oscillating knife, roller, creaser, pen | active oscillating knife, roller, creaser, pen | active oscillating knife, roller, creaser, pen |
| ?ixing ?ateria l | mechanical, vacuum, hybrid | mechanical, vacuum, hybrid | mechanical, vacuum, hybrid |
| Power | 400 ?, compressed air min? 8 bar | 400 ?, compressed air min? 8 bar | 400 ?, compressed air min? 8 bar |
| | | Additional options | |
| Positioning camera | ✓ | ✓ | ✓ |
| ?o tary axis on the table | ✓ | ✓ | ✓ |
| Scanner | ✓ | ✓ | ✓ |
| Installation of dust extraction | ✓ | ✓ | ✓ |
| Positioning bases | ✓ | ✓ | ✓ |
| S?ooth C axis fo r aggregates angular and saw | ✓ | ✓ | ✗ |
| Central lubrication system with per?anent gr ease | ✓ | ✓ | ✓ |
| Drill aggregate | ✓ | ✗ | ✗ |
| Probe | ✓ | ✓ | ✗ |
| ?e?ote ser vice | ✓ | ✓ | ✓ |





# LASER CUTTING MACHINES

**The Seron FiberCut** series is a machine created for fast, precise cutting of elements from various types of metal sheets. Fiber optic cutters operate with high accuracy and repeatability guaranteeing the highest quality of cutting edges.

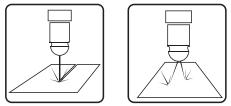
Laser cutting machines

# FiberCut

# FiberCut

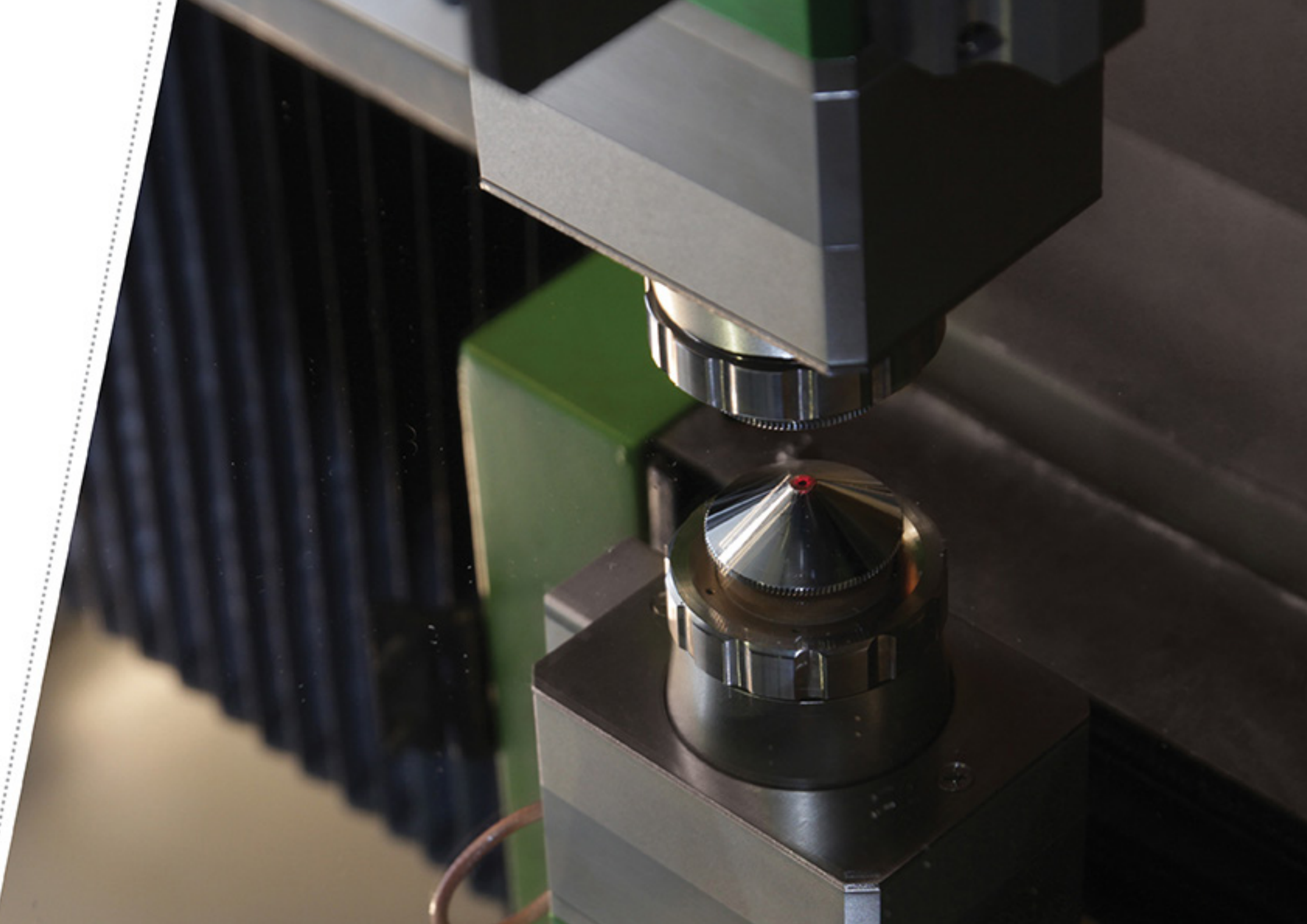
Industry 4.0

- modern real-time control system
- dynamic trajectory analysis using the EtherNet protocol
- technologically advanced fibercut machines designed for fast, precise cutting of sheet metal
- high durability key components
- an energy-saving technology
- an ergonomic protective housing that meets legal requirements
- automatic cooling system, ensuring stable machine operation
- any size of working area
- autofocus
- monitoring of key components
- remote technical and service support




Seron series FiberCut are machines created for fast and precise cutting of elements from various types of sheets. Fiber-optic cutters operate with excellent accuracy and repeatability guaranteeing the highest quality of cutting edges. The machine bed is a monolithic body subjected to the process of removing tensions and machining from one clamping. The drive support of the machine is made of light metals, which allows to obtain high working and traveling speeds. An intuitive, modern real-time control system with dynamic trajectory analysis and a reliable Ethernet connection enables the use of advanced functions such as sheet auto-sensing, position angle correction, autonesting, material base or parameter library, which also affects the machine's high precision, dynamics and performance.
Fiber lasers are equipped with dynamic control of the laser head position above the material and a shielding gas system. The combination of a solid construction with the highest quality components guarantees long-term, reliable operation.
The CNC control system is both intuitive and very user-friendly. The undoubted advantage of Fiber laser cutters over CO2 or YAG lasers is a significant simplification of the optics, no mirrors that transmit the laser beam (transmitted inside the fiber to the laser head), which minimizes transmission losses. Another important advantage of the Fiber laser source is greater efficiency compared to CO2 laser sources resulting in a lower energy consumption by about 70%. By sending virtually without loss of laser beam to the head, concentrating energy to high density at a very small diameter, the cutting speed of particularly thin sheets is several times higher than using a CO2 laser, process gas consumption is also much lower. The FiberCut machine guarantees a stable cutting process without the need for maintenance. The use of top-class components complements the solid base. Compact cutter with sectional extraction table.

| Size of working area [mm] | | Max. speed | Powers | Acceleration | Recurrence positioning | Automatic height control | A focal variable head (zoom) | Table bearing capacity | Pallet changer | Dust collector with ultraweb filters |
|---|---|---|---|---|---|---|---|---|---|---|
| X | Y | | | | | | | | | |
| 1550 | 3050 | up to 254 m/min | 500 - 8000 W | up to 2,8 G | up to 0,01 mm | yes | autofocus | 1200 kg | yes | yes |
| 2050 | 4050 | | | | | | | | | |
| 2050 | 6050 | | | | | | | | | |



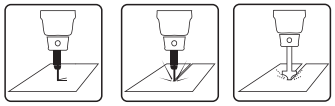
# PLASMA CUTTERS CNC

**SERON CNC plasma cutters** are characterized by solid construction and user-friendly control. Innovative CNC plasma cutters are used in the construction, machinery and even decorative industries.

Plasma cutters
with extraction
table sectional

# PlasmaCut

- professional and precise machine with full cut repeatability
- welded steel structure combined with top-class components
- sectional table construction for easy cleaning - extraction only from the place of burning
- ball guide system for easy material loading
- significantly lower operating costs compared to or water cutting
- closed cable guides
- precision axis guides
- any size of wroking area
- remote technical and service support




**Technologies used**

**ISSCS -** Integrated suction sections control system - an integrated suction sections control system that increases the efficiency of extracting dust from the cutting point.

**MPRS -** Material Position Recognition System - sheet metal position identification system.

**PTHSS -** Plasma Torch High Speed Support - high velocity plasma torch holder equipped with Z axis servo drive.

**THC -** Torch Height Control - plasma torch height controller monitoring cut height with an accuracy of 0.1mm.

**DMDS -** Dynamic Material Detection System - a dynamic material detection system that allows fast automatic material detection, precise determination of perforation height, with the possibility of a contactless procedure of penetration of low thickness sheets.

**VCS -** Vertical Collision System - vertical anti-collision system that protects against burner damage in the event of a collision with the material.

**LPI -** Laser Position Indicator - laser position indicator of the burner.

**HDPS -** High Durable Protective Screen-a high-strength protective screen that protects the operator's eyes and the machine's surroundings from radiation, burns and liquid metal spatter.

**CAD / CAM software -** equipped with nesting and a database of drawings.

**Available accessories:**

- a rotor for processing pipes and profiles with a working area length
- an extended support that allows work outside the work table
- a filtering system

**Extraction table:**

- table load capacity up to 1500 kg/m2
- enables effective extraction of dust from the cutting point
- less risk of corrosion at the cutting edges
- clean and friendly working environment for the operator

| Model | Size of working area [mm] XY | | Z axis [mm] Z | Max speed of trips [m/min] | AC Servo Motors | Weight [kg]* | Dimensions [mm] * ** |
|---|---|---|---|---|---|---|---|
| **1530** | 1550 | 3050 | 200 (option 300) | 60 | yes | 2400 | 2500 x 4050 x 210 0 |
| **2040** | 2050 | 4050 | 200 (option 300) | 60 | yes | 3200 | 3000 x 5050 x 210 0 |
| **2060** | 2050 | 6050 | 200 (option 300) | 60 | yes | 4200 | 3000 x 7050 x 210 0 |

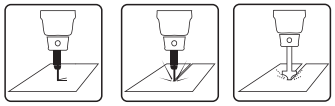
* may vary depending on the equipment options ** dimension does not include control cabinet

| Source | Hypertherm | | | | | Thermal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Powermax 65 | Powermax 85 | Powermax 105 | Powermax 125 | Max Pro 200 | Dynamics 60 | Dynamics 80 | Dynamics 120 | Dynamics Auto-Cut | Dynamics Auto-Cut 300 XT |
| Qualitative cutting [mm] | 20 | 25 | 32 | 38 | 50 | 10 | 12 | 15 | 25 | 35 |
| Cutoff [mm] | 32 | 38 | 50 | 57 | 75 | 25 | 30 | 40 | 50 | 70 |
| Puncture [mm] | 16 | 19 | 22 | 25 | 32 | 15 | 20 | 20 | 35 | 40 |
| Functions the additional | FineCut can be used - precise cutting of thin sheets | | | | | | | | secondary water mist system WMS | |

Plasma cutters
with water table

# PlasmaCut

- professional and precise machine with full cut repeatability
- welded steel construction combined with top-class components
- modular table structure for easy cleaning
- ball guide system for easy material loading
- significantly lower operating costs compared to cutting with water
- closed cable guides
- precise axis guides
- any size of working area
- remote technical and service support




**Technologies used**

**WCS -** Water Coolling System - ensuring absorption of sparks and gases by water

**ISSCS -** Integrated suction sections control system - an integrated suction sections control system that increases the efficiency of extracting dust from the cutting point.

**MPRS -** Material Position Recognition System - sheet metal position identification system.

**PTHSS -** Plasma Torch High Speed Support - high velocity plasma torch holder equipped with Z axis servo drive.

**THC -** Torch Height Control - plasma torch height controller monitoring cut height with an accuracy of 0.1mm.

**DMDS -** Dynamic Material Detection System - a dynamic material detection system that allows fast automatic material detection, precise determination of perforation height, with the possibility of a contactless procedure of penetration of low thickness sheets.

**VCS -** Vertical Collision System - vertical anti-collision system that protects against burner damage in the event of a collision with the material.

**LPI -** Laser Position Indicator - laser position indicator of the burner.

**HDPS -** High Durable Protective Screen-a high-strength protective screen that protects the operator's eyes and the machine's surroundings from radiation, burns and liquid metal spatter.

**CAD / CAM software -** equipped with nesting and a database of drawings.

**Available accessories:**

- stainless steel bathtub
- rotator for processing pipes and profiles with working area length
- extended support for working outside the work table

**Water table:**

- Table load capacity up to 1500 kg / m2.
- It ensures clean cutting, cooling of the material and reduces the emission
- of harmful gases during processing.
- Allows so-called cutting on the water surface, thanks to which we also get additional benefits: a quieter cut and a better surface of the material being cut
- The liquid they fill is a filtering function
- Cheaper in operation than traditional filtering systems.
- The use of the water table allows for a significant reduction in the deformation of the fired details, especially those with small thicknesses

| Model | Size of working area [mm] XY | | Z axis [mm] Z | Max speed of trips [m/min] | AC Servo Motors | Weight [kg]* | Dimensions [mm] * ** |
|---|---|---|---|---|---|---|---|
| **1530** | 1550 | 3050 | 200 (option 300) | 60 | yes | 1800 | 2500 x 4050 x 210 0 |
| **2040** | 2050 | 4050 | 200 (option 300) | 60 | yes | 2400 | 3000 x 5050 x 210 0 |
| **2060** | 2050 | 6050 | 200 (option 300) | 60 | yes | 2900 | 3000 x 7050 x 210 0 |

* may vary depending on the equipment options ** dimension does not include control cabinet

| Source | Hypertherm | | | | | Thermal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Powermax 65 | Powermax 85 | Powermax 105 | Powermax 125 | Max Pro 200 | Dynamics 60 | Dynamics 80 | Dynamics 120 | Dynamics Auto-Cut | Dynamics Auto-Cut 300 XT |
| Qualitative cutting [mm] | 20 | 25 | 32 | 38 | 50 | 10 | 12 | 15 | 25 | 35 |
| Cutoff [mm] | 32 | 38 | 50 | 57 | 75 | 25 | 30 | 40 | 50 | 70 |
| Puncture [mm] | 16 | 19 | 22 | 25 | 32 | 15 | 20 | 20 | 35 | 40 |
| Functions the additional | FineCut can be used - precise cutting of thin sheets | | | | | | | | secondary water mist system WMS | |

Plasma cutters
with extended portal
and rotator

# PlasmaCut

- the tube turnover allows not only cutting pipes, but also profiles of various shapes
- the extended portal extends the machining capabilities of the machine by cutting large size
- details set outside the work table
- professional and precise machine with full cut repeatability
- welded steel construction combined with top-class components
- much lower operating costs in relation to cutting with water
- closed cable guides
- precise x, y and z axis guides
- modular table structure for easy cleaning
- ball guide system for easy material loading
- remote technical and service support

**Technologies used**

**ROCS -** Rotary Object Cutting System - pipe and profile cutting system.

**ISSCS -** Integrated suction sections control system - an integrated suction sections control system that increases the efficiency of extracting dust from the cutting point.

**MPRS -** Material Position Recognition System - sheet metal position identification system.

**PTHSS -** Plasma Torch High Speed Support - high velocity plasma torch holder equipped with Z axis servo drive.

**THC -** Torch Height Control - plasma torch height controller monitoring cut height with an accuracy of 0.1mm.

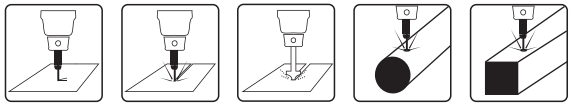
**DMDS -** Dynamic Material Detection System - a dynamic material detection system that allows fast automatic material detection, precise determination of perforation height, with the possibility of a contactless procedure of penetration of low thickness sheets.

**VCS -** Vertical Collision System - vertical anti-collision system that protects against burner damage in the event of a collision with the material.

**LPI -** Laser Position Indicator - laser position indicator of the burner.

**HDPS -** High Durable Protective Screen-a high-strength protective screen that protects the operator's eyes and the machine's surroundings from radiation, burns and liquid metal spatter.

**CAD / CAM software -** equipped with nesting and a database of drawings.



MARKING CUTTING GROOVE PIPES CUTTING SQUARE PROFILES CUTTING

**Available accessories:**

- water table or sectional table with a capacity of up to
- 1500 kg/m2 square
- profile adapter fan with sparks screening
- filtering system

**Pipe rotator:**

- It allows not only cutting pipes, but also cutting irregular holes using plasma technology.
- Diameter of processed pipes from 50 mm to 350 mm, length of processed pipes up to 3000 mm, weighing up to 500 kg.

**Portal arm:**

- It extends the machining capabilities of the machine by cutting large size details placed in the extended field (next to the machine).
- Machining outside the working area of the cutter can be done using a rotator or other material fastening system.
- The length of the workpieces is limited only by the possibility of longitudinal travel of the machine carrier.

| Model | Size of working area [mm] | | Z axis [mm] | Max speed of trips [m/min] | AC Servo Motors | Weight [kg]* | Dimensions [mm] * ** |
|---|---|---|---|---|---|---|---|
| **1530** | 1550 (+1000) | 3050 | 200 (option 300) | 60 | yes | 3100 | 3500 x 4050 x 2100 |
| **2040** | 2050 (+1000) | 4050 | 200 (option 300) | 60 | yes | 3900 | 4000 x 5050 x 2100 |
| **2060** | 2050 (+1000) | 6050 | 200 (option 300) | 60 | yes | 4900 | 4000 x 7050 x 2100 |

| Source | Hypertherm | | | | | Thermal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Powermax 65 | Powermax 85 | Powermax 105 | Powermax 125 | Max Pro 200 | Dynamics 60 | Dynamics 80 | Dynamics 120 | Dynamics Auto-Cut | Dynamics Auto-Cut 300 XT |
| Qualitative cutting [mm] | 20 | 25 | 32 | 38 | 50 | 10 | 12 | 15 | 25 | 35 |
| Cutoff [mm] | 32 | 38 | 50 | 57 | 75 | 25 | 30 | 40 | 50 | 70 |
| Puncture [mm] | 16 | 19 | 22 | 25 | 32 | 15 | 20 | 20 | 35 | 40 |
| Functions the additional | FineCut can be used - precise cutting of thin sheets | | | | | | | | secondary water mist system WMS | |

* may vary depending on the equipment options ** dimension does not include control cabinet

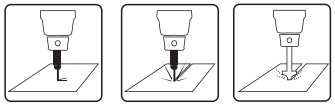
PlasmaCutters

# DualCut

# DualCut

Industry 4.0

- welded steel construction combined with top-class components
- portal construction, roadway separated from the working table
- precise and repeatable cutting of steel
- significantly lower operating costs compared to cutting with water
- modular construction enabling any size of work
- cut with both plasma and gas




**Technologies used**

**DSC -** Dual Cutting System - plasma or gas cutting system

**ISSCS -** Integrated suction sections control system - an integrated suction sections control system that increases the efficiency of extracting dust from the cutting point.

**MPRS -** Material Position Recognition System - sheet metal position identification system.

**PTHSS -** Plasma Torch High Speed Support - high velocity plasma torch holder equipped with Z axis servo drive.

**THC -** Torch Height Control - plasma torch height controller monitoring cut height with an accuracy of 0.1mm.

**DMDS -** Dynamic Material Detection System - a dynamic material detection system that allows fast automatic material detection, precise determination of perforation height, with the possibility of a contactless procedure of penetration of low thickness sheets.

**VCS -** Vertical Collision System - vertical anti-collision system that protects against burner damage in the event of a collision with the material.

**LPI -** Laser Position Indicator - laser position indicator of the burner.

**HDPS -** High Durable Protective Screen-a high-strength protective screen that protects the operator's eyes and the machine's surroundings from radiation, burns and liquid metal spatter.

**CAD / CAM software -** equipped with nesting and a database of drawings.

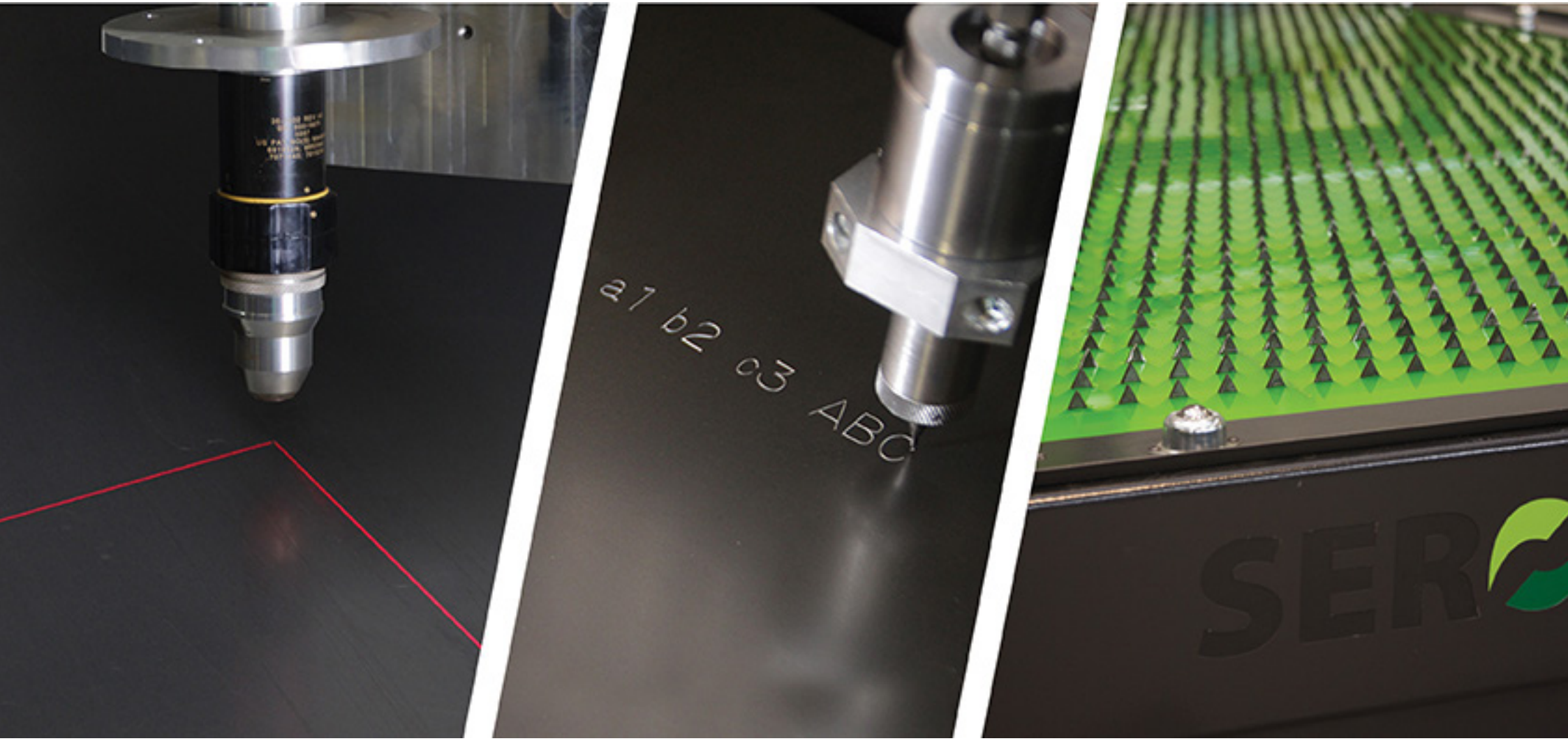
**Available accessories:**

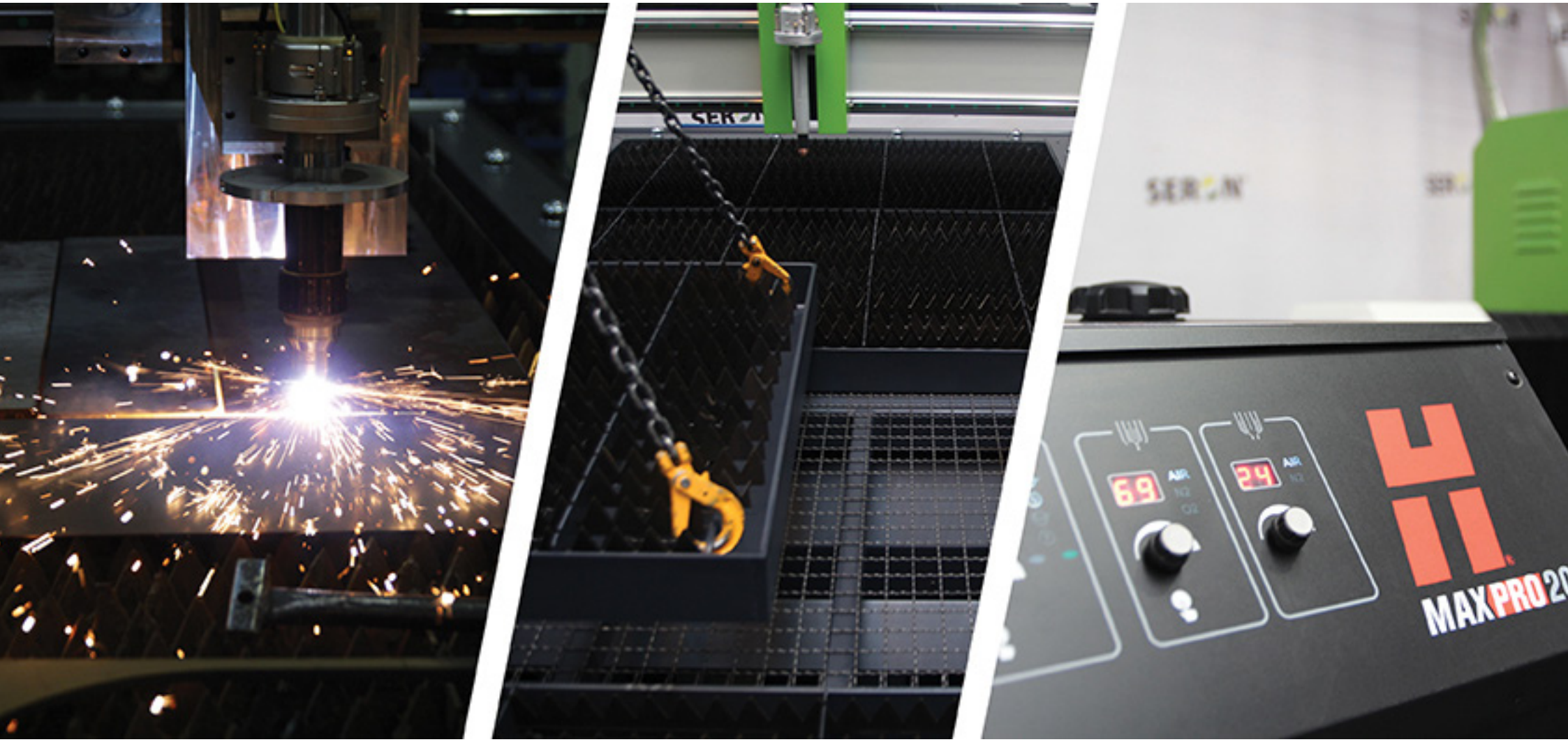
- sectional or water extraction table with replaceable grate with a capacity of up
- to 2500 kg/m2
- laser position indicator torch,
- rotator for processing pipes and profiles with working field length,
- additional oxygen or plasma torch,
- mobile pallet for easy loading and unloading

| Plazma | Wielkość pola roboczego [mm]*** | | Prześwit [mm] | Palnik gazowy | Palnik plazmowy | Waga [kg]* | Rozmiar szer/dł/wys [mm]* ** |
|---|---|---|---|---|---|---|---|
| | X | Y | Z | | | | |
| **2040** | 2000 | 4000 | 250 | tak | tak | 5800 | 3400 x 6300 x 2100 |
| **2060** | 2000 | 6000 | 250 | tak | tak | 7900 | 3400 x 8300 x 2100 |
| **2560** | 2500 | 6000 | 250 | tak | tak | 9400 | 3900 x 8300 x 2100 |
| **3060** | 3000 | 6000 | 250 | tak | tak | 10400 | 4400 x 8300 x 2100 |

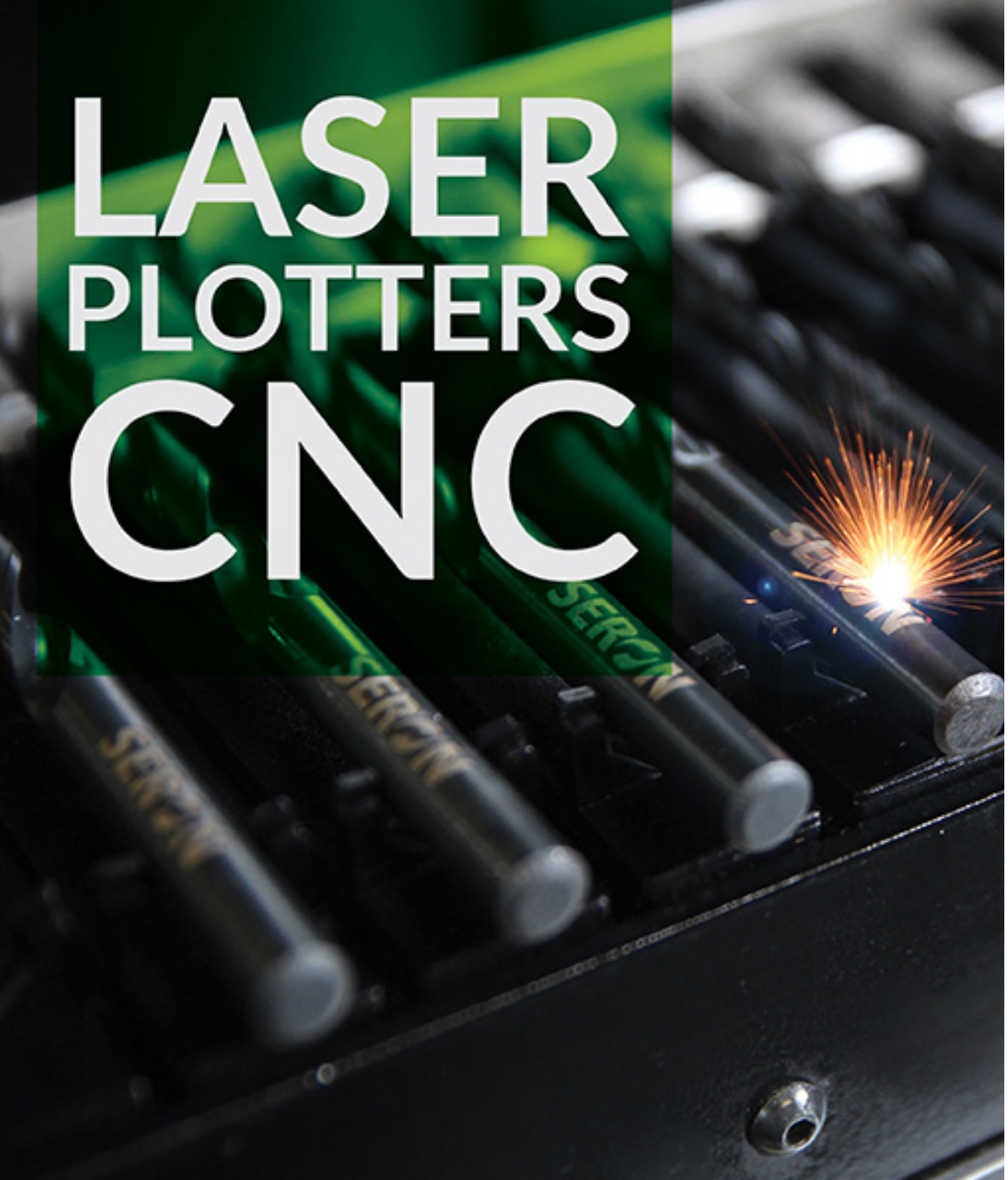
* may vary depending on the equipment options ** dimension does not include control cabinet

| Source | Hypertherm | | | | | Thermal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Powermax 65 | Powermax 85 | Powermax 105 | Powermax 125 | Max Pro 200 | Dynamics 60 | Dynamics 80 | Dynamics 120 | Dynamics Auto-Cut | Dynamics Auto-Cut 300 XT |
| Qualitative cutting [mm] | 20 | 25 | 32 | 38 | 50 | 10 | 12 | 15 | 25 | 35 |
| Cutoff [mm] | 32 | 38 | 50 | 57 | 75 | 25 | 30 | 40 | 50 | 70 |
| Puncture [mm] | 16 | 19 | 22 | 25 | 32 | 15 | 20 | 20 | 35 | 40 |
| Functions the additional | FineCut can be used - precise cutting of thin sheets | | | | | | | | secondary water mist system WMS | |


a1 b2 c3 ABC
SER


69
AIR
24
AIR
MAXPRO20

# LASER PLOTTERS CNC



**CO2 laser plotters** are one of the more universal and versatile machines. They are successfully used in almost every industry, from automotive, through air, to advertising or paper.

Laser plotters

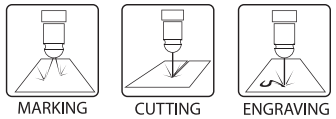
# Series SL, RF, FlatBed

# Laser plotters

# Seria SL, RF

CUTTING ENGRAVING


ENGRAVING / MARKING

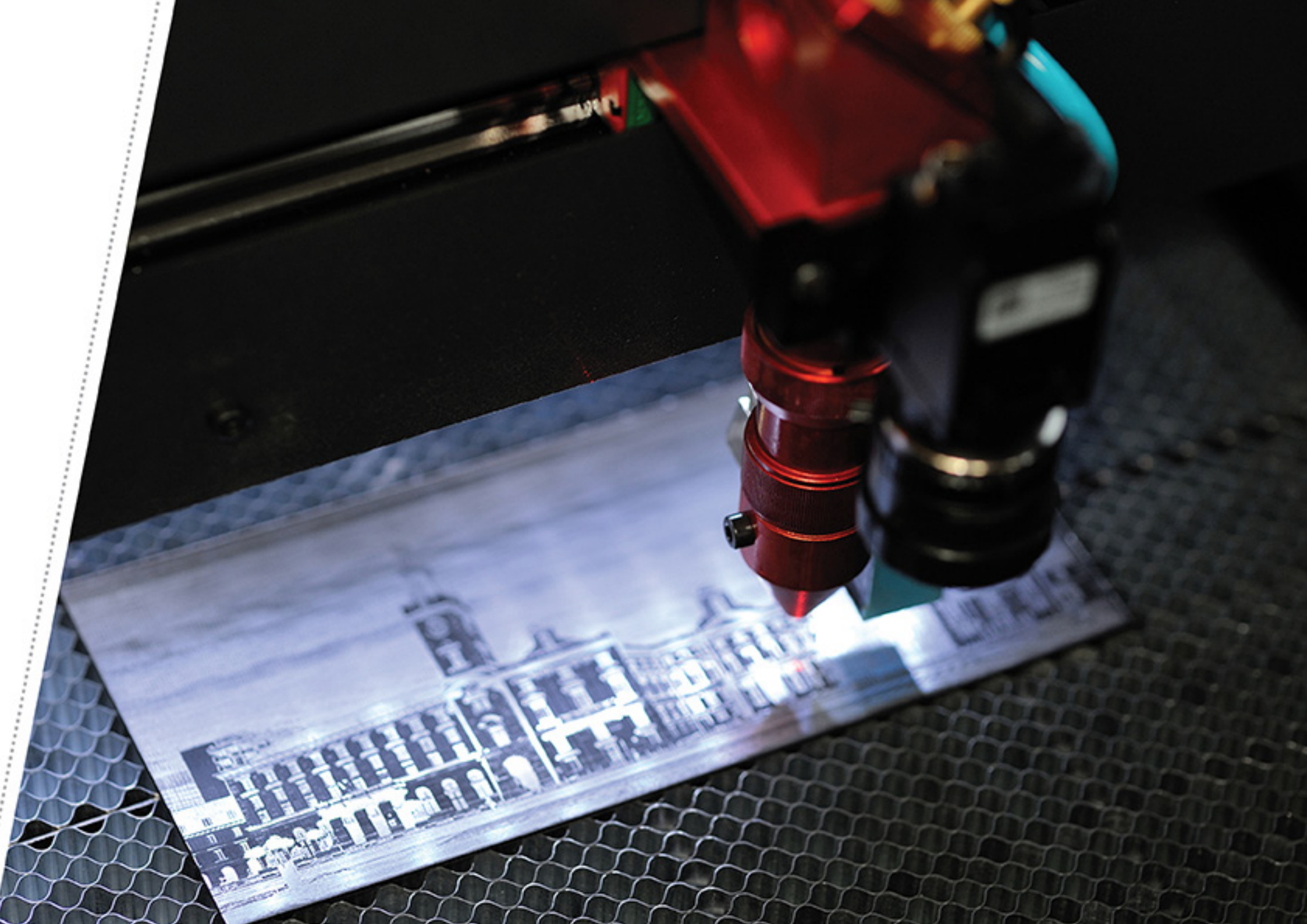

- RF series - the highest quality engraving
- SL series - quick accurate cutting
- Universal and versatile CO2 laser plotters

CO2 laser plotters are one of the most versatile machines that are successfully used in many industries. Seron laser plotters are designed for cutting and engraving such materials as: plywood, plexiglass, leather, wood, paper, textiles, rubber, cork, engraving laminates, etc. CO2 laser plotters are perfect for engraving small items such as stamps, which indicates their high precision. Plotters were designed from basis by our engineers, they are assembled in Poland and subjected to continuous improvement. The devices have been equipped with an ergonomic housing with reinforced construction, and their handling is very intuitive.

**SPECIFICATION:**

| | | | |
|---|---|---|---|
| **Interface:** | USB/LAN/optional WiFi | **Lens:** | silicon plus coating with Zinc Selenium Si + ZnSe, fi20mm |
| **Compressor:** | yes | **Mirrors:** | metal plus Molybdenum coating Mo , fi 25mm |
| **Extraction of fumes:** | yes | **Table type:** | vacuum ventilated, overlays: honeycomb or knife |
| **CAM software:** | yes, en, pl version | **Red point:** | yes, transmitted by mirrors |
| **Resonator cooling:** | yes, chiller | **Through table:** | yes, it allows machining of materials longer than the Y axis working area |
| **Air Assist:** | yes | **It features:** | autofocus |
| **Working field lighting:** | yes | **Additional options:** | - rotary adapter<br>- filtroventilation<br>- active Cam |

| Laser plotters | Size of working area [mm] | | Z axis [mm] | Positioning accuracy [mm] | Motors | Max speed of acquisitions [mm/s] V | Type of laser resonator | Resonator power | Power supply voltage [V] | Max power consumption [W] | Weight [kg]* | Dimensions W x L x H [mm]* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SL0503** | 500 | 300 | 200 | 0,02 | stepper | 1000 | glass | 40W / 50W | 230 | 1500 | 80 | 950 x 800 x 750 |
| | | | | 0,01 | servo | 1700 | | | | | | |
| **SL0604** | 600 | 400 | 300 | 0,02 | stepper | 1000 | glass | 50W - 80W | 230 | 2000 | 200 | 1150 x 900 x 1050 |
| | | | | 0,01 | servo | 1700 | | | | | | |
| **RF0604** | | | | | servo | 1800 | RF | 30W - 80W | | | | |
| **SL0906** | 900 | 600 | 300 | 0,02 | stepper | 1000 | glass | 60W - 100W | 230 | 2500 | 250 | 1400 x 1100 x 1050 |
| | | | | 0,01 | servo | 1700 | | | | | | |
| **RF0906** | | | | | servo | 1800 | RF | 30W - 150W | | | | |
| **SL1208** | 1200 | 800 | 300 | 0,02 | stepper | 1000 | glass | 60W - 130W | 230 | 2500 | 300 | 1800 x 1300 x 1050 |
| | | | | 0,01 | servo | 1500 | | | | | | |
| **RF1208** | | | | | servo | 1800 | RF | 30W - 150W | | | | |
| **SL1512** | 1500 | 1200 | 300 | 0,02 | stepper | 1000 | glass | 60W - 130W | 230 | 3000 | 500 | 2190 x 1780 x 1130 |
| | | | | 0,01 | servo | 1700 | | | | | | |
| **RF1512** | | | | | servo | 1800 | RF | 30W - 150W | | | | |
| **SL1520** | 1500 | 2000 | 300 | 0,02 | stepper | 1000 | glass | 60W - 130W | 230 | 3500 | 700 | 2150 x 2700 x 1100 |
| | | | | 0,01 | servo | 1700 | | | | | | |



Laser plotters

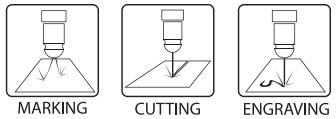
# FlatBed

# F l a t B e d

Seria FlatBed

CUTTING ENGRAVING


ENGRAVING / MARKING


- large format CO2 laser plotter
- a sequential gas suction system
- the ability to work on materials longer than the working area

CO2 laser plotters from the Flatbed series are machines with a large-format, open working area. They have all the typical features of CO2 plotters. They are one of the most versatile machines that are successfully used in many industries. The exposed working area makes it easier to place and remove material, which is a real advantage of these devices. This allows for efficient work in a production environment where machining large flat surfaces is important. The ribbed and welded steel construction was designed and made by our engineers. The technology used is characterized by high stiffness and precision. The plotters are equipped with a high-efficiency gas section suction system, implemented by several fans, which are responsible for extracting the exhaust gases to the outside.

**SPECIFICATION:**

| | | | |
|---|---|---|---|
| **Interface:** | USB/LAN/optional WiFi | **Lens:** | silicon plus coating with Zinc Selenium Si + ZnSe, fi20mm |
| **Compressor:** | yes | **Mirrors:** | metal plus Molybdenum coating Mo , fi 25mm |
| **Extraction of fumes:** | yes | **Table type:** | vacuum ventilated, overlays: honeycomb or knife |
| **CAM software:** | yes, en, pl version | **Red point:** | yes, transmitted by mirrors |
| **Resonator cooling:** | yes, chiller | **Through table:** | yes, it allows machining of materials longer than the Y axis working area |
| **Air Assist:** | yes | **Additional options:** | - filtroventilation<br>- active Cam |

| Laser plotters | Size of working area [mm] X | Y | Max height of the item [mm] Z | Positioning accuracy [mm] | Motors | Max speed of acquisitions [mm/s] V | Type of laser resonator | Resonator power | Power supply voltage [V] | Max power consumption [W] | Weight [kg]* | Dimensions W x L x H [mm]* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **FlatBed 1625** | 1600 | 2500 | 20 | 0,03<br>0,02 | stepper<br>servo | 1000<br>1700 | glass / RF | 80W - 130W | 400 | 4000 | 850 | 2600 x 3500 x 1000 |
| **FlatBed 2131** | 2100 | 3100 | 20 | 0,04<br>0,03 | stepper<br>servo | 1000<br>1700 | glass / RF | 80W - 130W | 400 | 4500 | 1000 | 2900 x 3800 x 1100 |

The engraving area for the X axis is 20 or 30 mm smaller; * approximate data, depending on the machine equipment

# LASERS MARKERS CNC

**CO2 and Fiber laser markers** are technologically advanced devices designed for precise and fast marking as well as for deep engraving. They are used wherever marking time counts and the highest quality.

Lasers markers

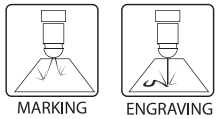
# Fiber & CO2

# Lasers markers

# Fiber

- technologically advanced Fiber laser marking machine
- precise, fast, deep engraving and marking
- dedicated to metals and their alloys, including rare, precious and coated
- Mobile marking head
- ultra-fast precision galvo scanner
- marking on the fly
- bar code generation, serial numbers


*doesn't apply to transparent plexiglass




Laser markers with a Fiber laser source are technologically advanced devices designed for precise and fast engraving, also in depth. Fiber markers can be used in many industries, including the automotive, electronics, machinery, advertising and decorative industries. Thanks to the small dimensions, the devices are suitable for mobile work. The markers use the latest Fiber optic-fiber technology with high durability and advanced optics: ultra-fast galvo scanner and F-theta lens for beam direction.
This technology provides even more accurate and more efficient work compared to other such machines available on the market.

**Available accessories:**

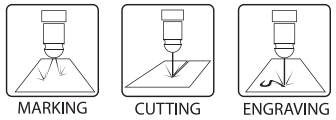
- object feeder (linear, disk type)
- rotary axis (tilting)
- mobile head

| | markers | Size of the working field [mm] XY | | Max height of the item [mm] Z | Max marking speed [mm/s] | Diameter of the spot [mm] | Depth of marking [mm] | Max resolution [dpi] | Resonator power P | Chiller | Power supply voltage [V] | Weight [kg]* M | Dimensions W x L x H [mm]* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBER | ZF 0101 | 110 | 110 | 200 | to 7000 | 0,01 | up to 0,5 * | 3000x3000 | 20w/ 30W / 50W | air-cooled resonator | 230 | 65 | 550 x 800 x 820 |
| FIBER | ZF 0202 | 200 | 200 | 50 | to 7000 | 0,01 | up to 0,5 * | 1500x1500 | 20W / 30W / 50W | air-cooled resonator | 230 | 65 | 550 x 800 x 820 |
| CO2 | ZC 0101 | 100 | 100 | 550 | to 5000 | 0,1 / 0,08 ** | up to 2 *** | 2500x2500 | 30-120 W | yes | 230 | 85 | 390 x 2100 x 1250 |
| CO2 | ZC 0202 | 200 | 200 | 400 | to 5000 | 0,1 / 0,08 ** | up to 2 *** | 1250x1250 | 30-120 W | yes | 230 | 85 | 390 x 2100 x 1250 |

* - depends on the type of material; ** - for a working field 100x100mm; *** - depends on the type of material

# CO2

- fast precise galvo scanner
- dedicated to the application of logos, graphics, serial numbers, bar codes
- high efficiency and high precision and marking resolution
- metal or glass resonators


CO2 markers are technologically advanced devices designed for fast and precise engraving. Seron markers are used in companies from the industrial, food, advertising, electronic, automotive and decorative industries. The advantage of the devices is high efficiency, high quality of the laser beam, high speed, precision and resolution of marking. Marker components are characterized by long life, which results in many years of trouble-free operation of the device.

**Available accessories:**

- object feeder (linear, disk type)
- rotary axis (tilting)


FIBER 20W
DŁUGOŚĆ FALI
1064nm
MAKS. MOC LASERA
20W
ROK PRODUKCJI
2017
NR FABRYCZNY
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SERON Kołodziejczyk sp. j.
COP 18, 37-450 Stalowa Wola
www.seron.pl
CE

# Juxtaposition

| | | wood derivatives | stone | aluminum anodized | metals | paper | glass | textiles | plastic artificial |
|---|---|---|---|---|---|---|---|---|---|
| CUTTING | LASER SL SERIES | ✓ | | | | ✓ | | ✓ | ✓ |
| | LASER RF SERIES | ✓ | | | | ✓ | | ✓ | ✓ |
| | LASER FLATBED SERIES | ✓ | | | | ✓ | | ✓ | ✓ |
| | CO2 MARKER | | | | | ✓ | | ✓ | |
| ENGRAVING | LASER SL SERIES | ✓ | ✓ | ✓ | ✓* | ✓ | ✓ | ✓ | ✓ |
| | LASER RF SERIES | ✓✓ | ✓✓ | ✓✓ | ✓✓* | ✓✓ | ✓✓ | ✓✓ | ✓✓ |
| | LASER FLATBED SERIES | ✓ | ✓ | ✓ | ✓* | ✓ | ✓ | ✓ | ✓ |
| | FIBER MARKER | | | ✓ | ✓ | | | | ✓ |
| | CO2 MARKER | ✓ | ✓ | ✓ | ✓* | ✓ | ✓ | ✓ | ✓ |
| MARKING | FIBER MARKER | | | ✓✓ | ✓✓ | | | | ✓** |
| | CO2 MARKER | ✓✓ | ✓ | ✓ | ✓* | ✓✓ | ✓✓ | ✓ | ✓ |

# DLACZEGO MY?


## POLISH CNC MACHINE MANUFACTURER

Based on Polish creativity, we design and implement designs in Stalowa Wola city.

## EXPERIENCE

We translate more than 20 years of experience into the quality of our products.

## INNOVATION

We develop new technologies and develop current achievements.

## WE FOCUS ON THE HIGHEST QUALITY

We take care of every detail of our machine tools, guaranteeing many years of trouble-free operation.

## GUARANTEE

It's the customers who decide on the length of the warranty under the supervision of our specialists.

## FAST SERVICE

Immediate assistance is ensured thanks to the extensive service grid.


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