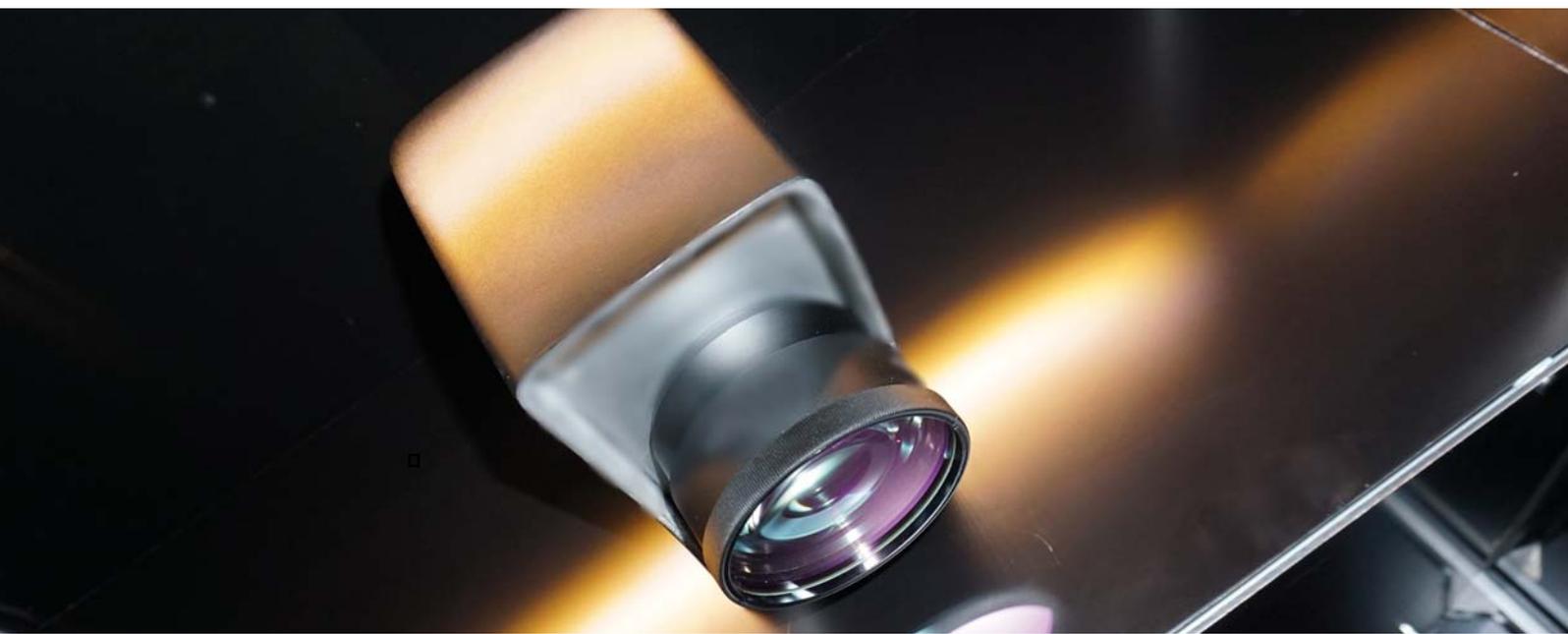




# FIBEERSX 5000 LASER MARKER CATALOG



4 YEARS  
WARRANTY





Paint removal

**EERS STARTED AS A LOCAL COMPANY AND BY TODAY BECOME SUCCESSFUL MULTINATIONAL COMPANY GROUP FOCUSING ON CENTRAL AND EASTERN EUROPE**

Optical and laser-based device development and production. Manufacture and integration of workstations designed for customer needs. Engineering services in automation. Full-scale distribution and after sales services.

**DIRECT INTERACTION - QUICK REACTION**

Our services and products are constantly being developed with the focus on fast and direct communication with our customers, which enables us to easily adapt to any market changes or customer needs.

The EERS company headquarters is located near Budapest with subsidiaries all over Europe. We take great pride in the fact that we have been providing customers with quality services and products over the years. We conduct business with many customers across Europe.



Foam rubber

**COMPLETE VISIBILITY**

Laser marking's easy-to-read printing makes it far superior to a printed mark. Stickers fall off and ink fades. Permanent marks can stand the test of time.

**SPEED**

Laser engraving is fast and simple. You can mark your parts faster with much less time spent on the actual process - up to 9.000 - 14.000 mm/s.

**FLEXIBILITY**

Laser markers provide a clear and high quality inscription on any materials whether they are plastic metal or natural minerals.

**REDUCED MAINTENANCE**

Replace it with longer working time - avoid downtime associated with printers or other consumable based systems as laser markers need nothing but power to work 24/7.

**MINIMAL CONTAMINATION**

Laser marking ensures clean processing with minimal contamination. Where printing systems will burn down the material by marking, the damage-free process involves minimal material penetration (if any).



Bakelite



Copper



Curved Marking

**THE QUALITY OF OUR SERVICES DEMONSTRATES OUR PARTNERSHIP**

We offer high quality services for stable partnerships. We offer the longest warranty period in the market - up to 4 years and 100.000 hours of working time. Our services include fast on-site repair, offering of on-time replacement units in case of extensive repairs being needed and all of this at competitive prices and we can be successful partners in tenders and public procurement.

Our laser marker is a perfect and universal solution for marking your parts as laser provides a permanent and time resistant mark on any surface.



Paint removal



Chrome surface

**ADVANTAGES**

**EASY TO USE**

it does not require a high level of human resources, no special knowledge needed, anybody can use it

**HIGH PRECISION**

up to 0,01 mm accuracy

**CONTINUOUS**

with Fly Marking - continuous marking on moving parts

**EXCLUDES HUMAN ERROR OPPORTUNITIES**

repeatable marking, without continuous settings needed

**HIGH PERFORMANCE DEVICE**

up to 200 w

**RECORDABLE SETTINGS**

can save programs - spared from further programming/testing, easy to set up marking parameters, wide scale of expedient functions

**CORRECT QUALITY MARKING**

high resolution thin laser beam

**AUTOMATIC PROCESSING**

possible to integrate to any type of production line

**RESISTANCE**

equipped with ip 64 cover, 24/7 work capability



Plexi

# MARKING SAMPLES





Cable channel



Wax paper

# FIBEER SX UV LASER

THE EERS HUNGARY INTRODUCES A NEW PRODUCT



Stainless Steel



Black ABS



Steel Tool



Hardened Glass



Polifoam



Anodized Aluminium



Paper Cover



Silicone cable



Glass



Ceramics

## ULTRA VIOLET LASER

The 355 nm series is a UV laser based on the combination of a powerful 1.0 μm fiber laser and a compact / efficient frequency converter. The output beam is near gaussian and collimated. The laser system is delivered with an interface module that allows to drive the laser very easily and to keep the frequency converter at constant temperature. This source is ideal for aerosol detection or biological experimentation applications.

### Ultraviolet lasers various applications:

Pulsed high-power ultraviolet lasers can be used for efficient marking and engraving of variety of materials, including materials which are transparent to visible light.

Continuous-wave UV sources are required for micro-lithography, e.g. in the context of semiconductor chip manufacturing.

## HIGHLY SENSITIVE MATERIALS

The low heat emitted from the marking process is so low that even the most sensitive materials and products remain undamaged.

## MARKED SAFETY

Even from medical plastics, aircraft accessories and automotive industry to transparent glasses and flame-resistant plastics can be marked. Medical products can be also marked safely thanks to low intensity the product remains sterile. Furthermore laser marks can be applied on glass without breaking it.

## BRILLIANT LASER MARKS

This is how permanent laser marks that are capable of sterilization can be applied on medical technology products such as catheters or insulin pumps, and this is also how filigree and brilliant laser marks can be applied on glass without breaking it. With UV now also silicones or white polyamide can be laser marked.

## UNDAMAGED PRODUCT

20 ns of duration in a normal basis and a beam diameter of 10 μm, The Fibeer SX UV only colors the surface so the product itself remains undamaged. Fibeer SX UV laser also able to mark silicon or polystyrene, even transparent plastic roll. The previously mentioned advantages makes the Fibeer SX UV laser marker a number one.

### UV LASER 3D LENS

TYPE	EFL (mm)	SCAN FIELD (mm)	TOTAL LENGTH (mm)	WORKING DISTANCE (mm)	AVERAGE SPOT SIZE (μm)	WAVELENGTH (nm)
ø 60	100.0	61.5x61.5	62.5	133.4	10.0	355
ø 100	160.0	112x112	50.4	205.8	18.0	355
ø 150	250.0	155x155	54.9	299.8	14.0	355
ø 210	328.0	212x212	79.6	406.4	17.5	355
ø 350	580.0	350x350	65.1	684.8	28.5	355
ø 500	810.0	500x500	83.2	976.4	43.0	355
ø 600	1000.0	650x650	91.9	1200.0	50.8	355

Cardboard



Plastic

## TEAM WORK

we are working in a great team for excellent and fast solution

## CALCULATING

our cost calculations achieves satisfaction of our costumers

## PROFESSIONAL CONSULTANCY

we can offer through analysis and consultancy to provide the best solution for any application

## EXPRESS SHIPPING

we offer express shipping on demand and usual shipping is within 4-6 working days - or some acceptable time frame

## TRAINING

we offer on-site training for any number of employees

## ACCESSORIES

we provide customized accessories on demand for any process

## PROGRAMMING

The superior reliability and very low maintenance laser marker systems have a positive impact on the overall equipment effectiveness.

Data matrix codes or barcodes are achieved with the highest quality either in stationary or on the fly marking.

## PLANNING AND SUPPORT

We offer support throughout our entire customer supplier relationship, from the very first phone call and even after the purchase.

We can offer key account status to our valued customers and can employ dedicated engineers at customer demands.

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# FIBER SX GREEN LASER

THE EERS HUNGARY INTRODUCES A NEW PRODUCT

Compact pulsed green fiber laser emitting at 532nm and delivering high peak power. This laser is a complete tool for environmental monitoring and 3D objects. Free of maintenance and easy to use, this outstanding fiber laser can be integrated into complex systems.

The EERS group develops and manufactures a pulsed green fiber laser. This highly reliable pulsed fiber laser is based on a pulsed fiber laser which frequency is doubled through a thermally stabilized crystal for a high efficiency. The delivered wavelength is 532nm and can be adjusted.

Our quality department is permanently checking and testing components and sub-systems. Therefore you can be sure that our Green laser will answer your technical needs.

Fiber Lasers in the green spectrum range enable EERS Group to serve new markets and applications. At output wavelengths of 532 nm, the new pulsed green fiber laser and continuous wave (CW) green fiber laser provide the high single-mode beam quality, ease of use and high reliability.

Green pulsed fiber lasers provide a high peak power with scalable average output power up to 25 W, pulse duration of 1 ns and frequency of 10 to 900 kHz. Featuring M2 of 1.2, the novel fiber laser is much more efficient and compact than conventional lasers now on the market, and is ideal for applications in the solar/photovoltaic arena, resistor trimming and marking of transparent materials. Higher output powers are planned.

The green fiber laser is a single-frequency and low noise laser that features output power up to 50 W, M2 <1.1, and a linewidth of <1 MHz at 532 nm. In a compact, rugged design, the CW green fiber laser is well suited where the highest coherency and stability of visible laser emission are required.



## GREEN LASER 3D LENS

TYPE:	EFL (mm)	SCAN FIELD (mm)	TOTAL LENGTH (mm)	WORKING DISTANCE (mm)	AVERAGE SPOT SIZE (µm)	WAVELENGTH (nm)
ø 70	100.0	72x72	50.0	100.0	12.0	532
ø 110	165.0	115x115	47.0	183.5	18.5	532
ø 150	254.0	150x150	51.0	280.0	21.5	532
ø 220	410.0	225x225	48.9	443.7	15.0	532
ø 350	507.0	350x350	62.5	590.5	29.0	532
ø 510	740.0	510x510	65.0	896.5	18.5	532



Iron dial with curved markings

# FIBER SX FIBER LASER

There are several advantages associated with fiber lasers. They are highly powerful, reliable and stable compared to other types of lasers. High beam quality is provided by fiber lasers. It is also compact and portable, and is relatively easier to use. It has high optical and electrical efficiency. The total cost of ownership involved is much lower, and it has a high immunity to tough environmental conditions and changes. The amplitude noise is low and also has low jitter. Users are able to select the wavelengths and have precise beam control with a fiber laser.

Creation of the light is 200% more efficient than via a traditional CO2 laser, and delivery is far simpler, with no expensive optical mirrors. The focusing lens, unlike on a conventional CO2 laser machine, is sealed in the cutting head and thus not a consumable item.

The light is channeled and amplified through fiber optic cable similar to that used for data transfer. The amplified light, on exiting the fiber cable, is collimated or straightened and then focused by a lens onto the material to be cut.

A fiber laser is a special type of laser in which the beam delivery as well as the laser cavity is integrated into a single system inside an optical fiber with the beam generated within the fiber, unlike conventional lasers where the beam is generated outside and sent into the system. Considered as a special category of solid state laser, fiber lasers provide many benefits compared with other laser technologies, such as:

- Maintenance-free operation
- High reliability
- Ease of use
- High integration capability

Fiber lasers are widely used in many applications such as cutting and marking and in many industries such as automotive, medical, electronics and manufacturing.

Laser engraving is the process of removing a portion of material to leave an engraved mark which is visible beneath. The engraving process is produced by the Laser beam removing material to create a mark, where the Laser acts like a chisel and blows away selected areas of the subject material. It is a subset process of laser marking where the object is actually marked beneath the surface and is the most common of all the laser marking applications. The depth of the engraving made will depend on the time as well as the type of material being used. It can be used on a variety of materials, including ceramics, plastics and all forms of metal.



Point marking



## FIBER LASER 3D LENS

TYPE:	EFL (mm)	SCAN FIELD (mm)	TOTAL LENGTH (mm)	WORKING DISTANCE (mm)	AVERAGE SPOT SIZE (µm)	WAVELENGTH (nm)	COLOUR ENGRAVING POSSIBLE
ø 50	160.0	50x50	27.0	182.3	38.5	1064	No
ø 70	100.0	70x70	49.5	98.8	11.0	1064	No
ø 110	163.0	112x112	49.0	184.0	31.5	1064	No
ø 150	192.0	152x152	63.0	221.8	25.0	1064	No
ø 175	254.0	175x175	61.7	269.9	43.5	1064	No
ø 200	330.0	205x205	60.0	385.0	50.0	1064	No
ø 300	338.0	305x305	52.5	362.8	25.5	1064	Yes
ø 500	815.0	500x500	104.9	962.0	50.0	1064	Yes



Gauge



Cable



Glass



Paint layer removal

# EERS WORKSTATION



3D Lens

## UNIQUE DESIGN

For the design of an industrial workstation, ergonomics guidelines are presented in a systematic manner. The guidelines provide a conceptual basis for a good workstation design. We work closely with your production managers or technical planners to ensure all your need are met with professionalism and up to expected standards.

Adequate posture, work height, normal and maximum working areas, lateral clearance and visual requirement are determined for the intended user population. The procedure for determining the workstation dimensions and layout has been explained. The importance of building a mock-up of the designed workstation and its evaluation with representative subjects is emphasized.

The workstation is built on sturdy aluminium profiles which gives us Flexibility to build according to customer requirements and allows us to place it anywhere, be it in the production area to be loaded with robotic arms or integrated to an existing workstation with it's own feeding system. The workstations are designed to be ergonomic and well balanced between easy handling, user friendliness and optimization of the workflow and reduced marking times. Using a workstation improves positioning precision for the markings and grants the user a safe work environment up to standardized safety regulations.

The workstations are fully adaptable with side by side features for any specification and we offer full service and spare parts as guaranteed.



AUTOMATIC WATERFALL



## DIMENSIONS

- A** - CE Certificate  
**C** - Exhaust  
**C** - Filter Sensor  
**e** - Computer  
**S** - Keyboard, Mouse  
**S** - Safety Sensor  
**S** - Laser Marker  
**O** - Camera  
**r** - FR 100 Code scanner, supplementary axis QR, data matrix  
**i** - Internal light  
**e** - Automated feeding with robot or conveyor system  
**S** - Correct high adjustable with highly adjustable work table.

- that you can get from us



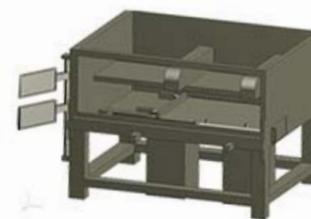
Safety Light Curtains



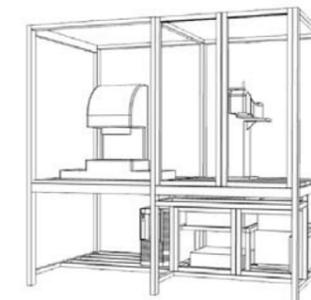
Ultrasound Sensor



Inline Code Reader



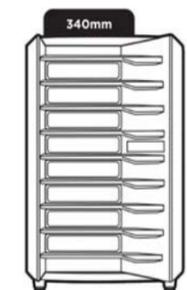
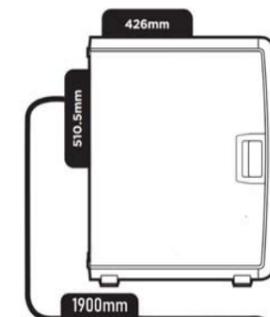
DOUBLE HEAD WORKSTATION



DOUBLE STATION WITH MEASURING SYSTEM

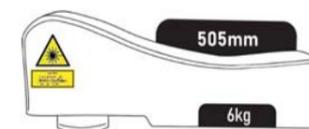
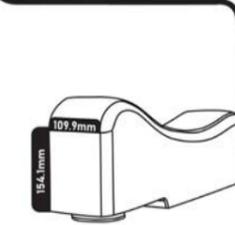
### LASER GENERATOR DIMENSIONS:

Height: 510.5mm  
 Width: 340mm  
 Length: 426mm  
 Cable length: 1900mm  
 Weight: 20kg

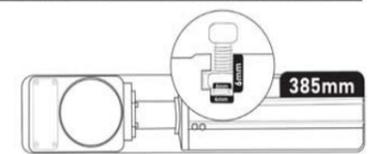


### LASER HEAD DIMENSIONS:

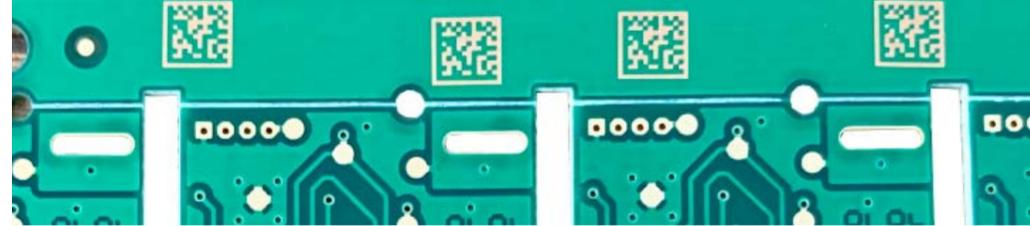
Height: 154.1 mm  
 Width: 109.9 mm  
 Length: 505 mm  
 Assembly track length: 385 mm  
 Weight: 6kg



Ports	
Basic	
Power Port	AC 230 V +/- 10 % 50 Hz
USB Port	USB 2.0 port
Extras	
Step Motor Driver Port	X Axis Y Axis Z Axis / Rotary
Process Control Port	Process Field Bus
	Process Field Network
Marking Signal Port	Foot Pedal Trigger
Optionally: USB 3.0, Wireless Fidelity and special outputs	



# THE NEW FIBER SX SOFTWARE



Printed circuit board

## SUPPORT

communicates with the Windows software

## PASSWORD

protection to prevent parameter change by unauthorized person

## FOUR WAYS FOR LASER CALIBRATION

built-in trapezoid calibration , parallelogram calibration and barrel-shape calibration, and proprietary calibration software that can provide exact result

## ASSISTANCE:

- THREE THE EXTENDED AXIS ( X.Y.Z )
- ROTARY MARKING AND DOUBLE AXIS MOSAIC MARKING /OPTIONAL/
- MARK-ON-FLY /OPTIONAL/
  - up to 500m/min
- SEPARATE RED LIGHT INDICATION
- POWERFUL IO CONTROL FUNCTIONS
- 256 LAYERS MARKING PARAMETERS
- MULTI-LINGUAL
  - localizing with ease

## PROVIDE SDK TO CUSTOMIZE SPECIAL SOFTWARE

## COMPLETE HATCH FUNCTIONS

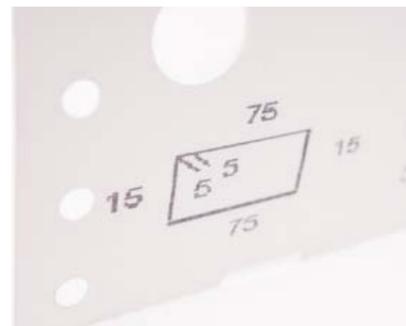
Ring-like hatch, the free angle hatch , interesting hatch with margins adjustable support 3 levels hatch and each level can be set separating parameters, supports 3 types of hatch simultaneously with different parameters each

## PIXEL POWER ADJUSTMENT

refers to whether or not the laser adjust the power according to the gray level of the pixel when processing each pixel of the bitmap



Serial numbers



Polyvinylchloride



Point marking



Black plastic

## POWERFUL VARIABLE-TEXT FUNCTIONS

fixed text, date, time, series number, keyboard, file list, COM and network communication, dynamic files, Excel and .txt file, and any customized database file image marking

## SUPPORTED DOCUMENT FORMATS

.ai, .plt, .dxf, .dst, .svg, .nc, .ezd, .ez3, .g, .elc, .gbr, .bot, .bin, .bmp, .jpg, .jpeg, .gif, .tga, .png, .tif, .tiff

## COMMON BARCODE LIKE

[Code 25 – Code 128, EANs, UPCs, ITF, CodeBar, GSI, PDF 417, Data Matrix (DMC) QR Code, Aztec Code, GM code, MAXI code

Supporting more than 450+ Text Type and 50+ Common Barcode:

## MAIN FUNCTIONS

Edit the graphic pattern ; supports TrueType fonts, single line fonts (JSF), dot matrix fonts (DMF), one-dimensional barcodes, and two-dimensional barcodes such as DataMatrix; Dynamic text processing ; FibeerSX can change the text real - time during processing, can read and write text files and Excel files directly ; powerful node and graphic editing function for curve welding, clipping and intersection calculation, Set different process parameters for different objects ; support Stl format 3D models file; support general image processing ( black-white bitmap inversion, grid - dot processing, etc.); support different hatch type; a variety of control objects, users can freely control system interaction with external devices

## NETWORK COMMUNICATION:

TCP / IP / SERIAL communication, PLC communication, SQL Database communication, and via a Network, Fixed texts, Serial numbers, Date codes, Time: Year, Week, Month, Day, Hour, Min, Sec, Files and .txt, word,excel, Logos, Pictures

PLC COMPATIBLE	yes
APPLICABLE MATERIAL	acrylic, crystal, leather, MDF, metal, plastic, plexiglass, wood, plywood, rubber, stone, other
AFTER-SALES SERVICE PROVIDED	on-site and local service center available
OS	xp / win7, 8, 10 32 / 64 bit
CERTIFICATION	CE . ISO



Scaling



Fiberglass plastic

# TECHNICAL PARAMETERS



Pendrive

SERIES	SX5001 UV	SX5003 UV	SX 5005 UV	SX5010 UV	SX5015 UV	SX5018 UV	SX5015 GR	SX 5035 GR	SX 5020	SX 5025	SX 5030	SX 5040	SX 5050	SX 5060	SX 5100	SX 5200	SX 5022 CO	SX 5033 CO	SX 5066 CO	SX 5100 CL	SX 5200 CL					
PERFORMANCE	1,5 W	3 W	5 W	10 W	15 W	18 W	15 W	35 W	20 W	25 W	30 W	40 W	50 W	60 W	100 W	200 W	20 W	30 W	60 W	100 W	200 W					
MARKING AREA	50 mm x 50 mm		100 mm x 100 mm		150 mm x 150 mm		150 mm x 150 mm		50 mm x 50 mm		100 mm x 100 mm		150 mm x 150 mm		300 mm x 300 mm		50 mm x 50 mm		150 mm x 150 mm		10 mm - 80 mm line					
OPTIONAL MARKING AREA	50 mm x 50 mm		100 mm x 100 mm		150 mm x 150 mm		255 mm x 255 mm 330 mm x 330 mm		35 mm x 35 mm 50 mm x 50 mm		70 mm x 70 mm 150 mm x 150 mm		175 mm x 175 mm 200 mm x 200 mm		250 mm x 250 mm 300 mm x 300 mm		175 mm x 175 mm 250 mm x 250 mm		300 mm x 300 mm		Not Applicable					
MARKING SPEED	up to 5000 mm/s		up to 7000 mm/s		up to 9000 mm/s		up to 7000 mm/s		up to 5000 mm/s		up to 7000 mm/s		up to 9000 mm/s		up to 5000 mm/s		up to 5000 mm/s		up to 5000 mm/s		Not Applicable					
FREQUENCY			20 kHz - 100 kHz				20 kHz - 100 kHz		20 kHz - 200 kHz		1 kHz - 600 kHz										20 kHz - 200 kHz					
LASER BEAM PRECISION			+/- 0,006 mm				+/- 0,05 mm				+/- 0,01 mm						+/- 0,05 mm				Not Applicable					
WAVELENGTH			355 nm				532 nm				1064 nm +/- 10 nm						10.6 µm				1064 nm +/- 10 nm					
MARKING DEPTH	up to 0,1 mm		up to 0,2 mm		up to 0,5 mm		up to 1 mm		up to 1 mm		up to 2 mm		up to 3 mm		up to 5 mm		up to 5 mm				Not Applicable					
POWER	AC 230 V +/- 10 % 50 Hz																									
OPERATING TEMPERATURE	15°C - 30°C																									
LASER SOURCE LIFETIME	up to 25000 hours						up to 20000 hours						up to 50000 - 100000 hours						up to 1000 - 6000 hours				up to 20000 hours			
SOFTWARE	Win10 / Win 7, 8, Xp 32-64 bit						Win 7						Win10 / Win 7, 8, Xp 32-64 bit													

## RENTING

We offer a possibility for long or short term rental of equipment. After the rental period, we buy the equipment at a discounted price.

## LEASING

We can assist with leasing options or provide with all documentation needed for quick administration.

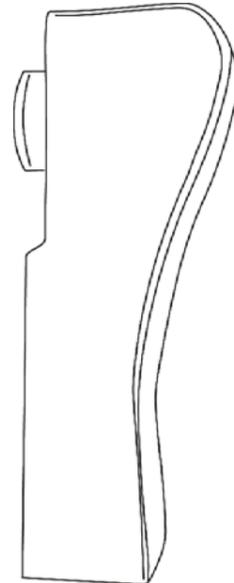
## PROJECT MARKING

We offer marking services according to customer needs for specific projects in case purchasing a laser equipment is not justified due to low marking needs.

## MAINTENANCE

We offer long term maintenance contract with each of our systems. By this we also guarantee an extended life time for the system, which ables us to offer the longest warranty period on the market - 4 years.

**4** Years  
Warranty



Welding seam cleaning



Clean greasing

## FiberCleaner

FIBERCLEANER is able to remove resin, oil, stains, dirt, rust, coating, plating, paint, oxide, ect. from the surface of metal and non-metal materials as Auto Part, Rubber Mold, High level CNC machining tools, Tyre mold, Rail, Environmental Protection etc.



Rust Remove



Paint removal



Molding form before / after

# EERS GROUP

## EUROPEAN ENGINEERING AND REPAIR SERVICES

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