

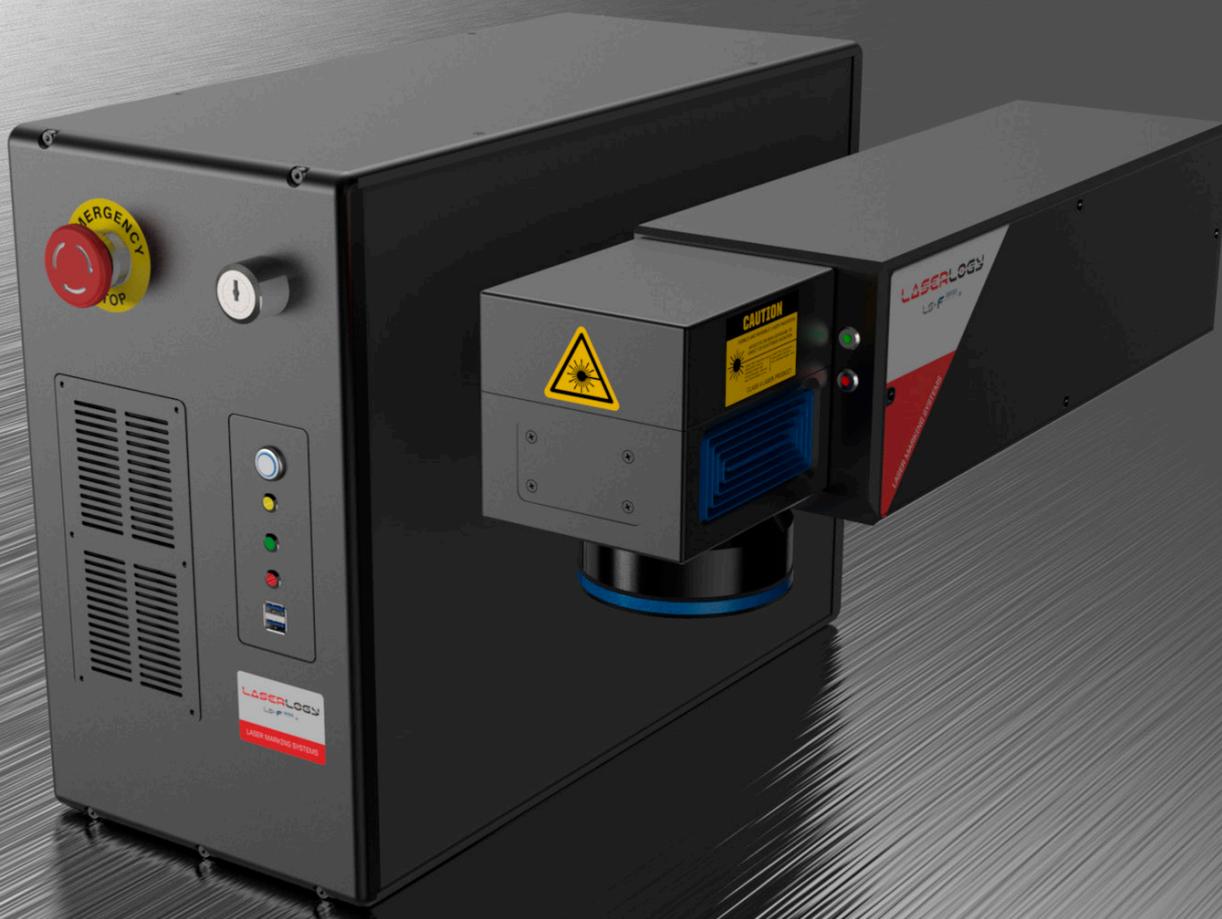
LASERLOGY

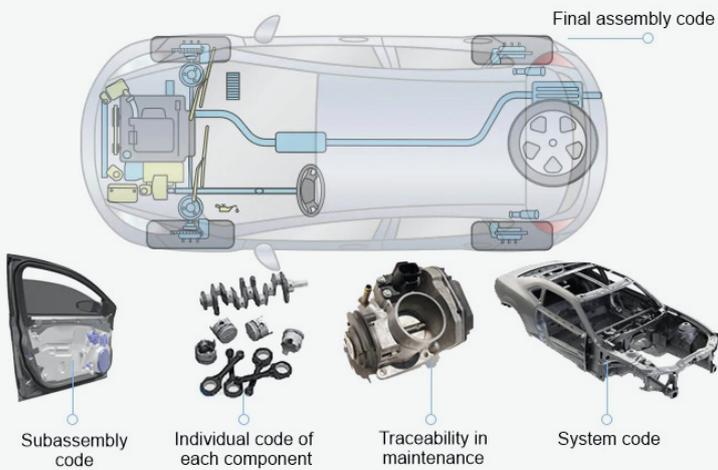
Laser Marking Systems

LS F SERIES

Brochure | Version 4.0

LASER MARKING SOLUTIONS





LASER MARKING

Laser marking allows you to create precise and permanent markings, even in hard-to-reach areas, through a fast and flexible process. LASERLOGY's innovative solutions allow you to enter information about work pieces as part of your production configuration. The permanence of the laser marks guarantees optimum traceability. In addition, contactless marking has several advantages, low material tension and low costs due to the absence of tool wear.



SERVICE

Our service begins long before a laser system is installed. Customer advice, feasibility analysis and project management are the pillars on which our concept of success is based. A global network of experts at the service of our customers.

TECHNOLOGY

Everything we do is based on the deployment of the latest laser technologies applied to the industry. Our company, enhances the things that move people. We develop and design solutions with a high technological value, always keeping the client's needs as a global focus.

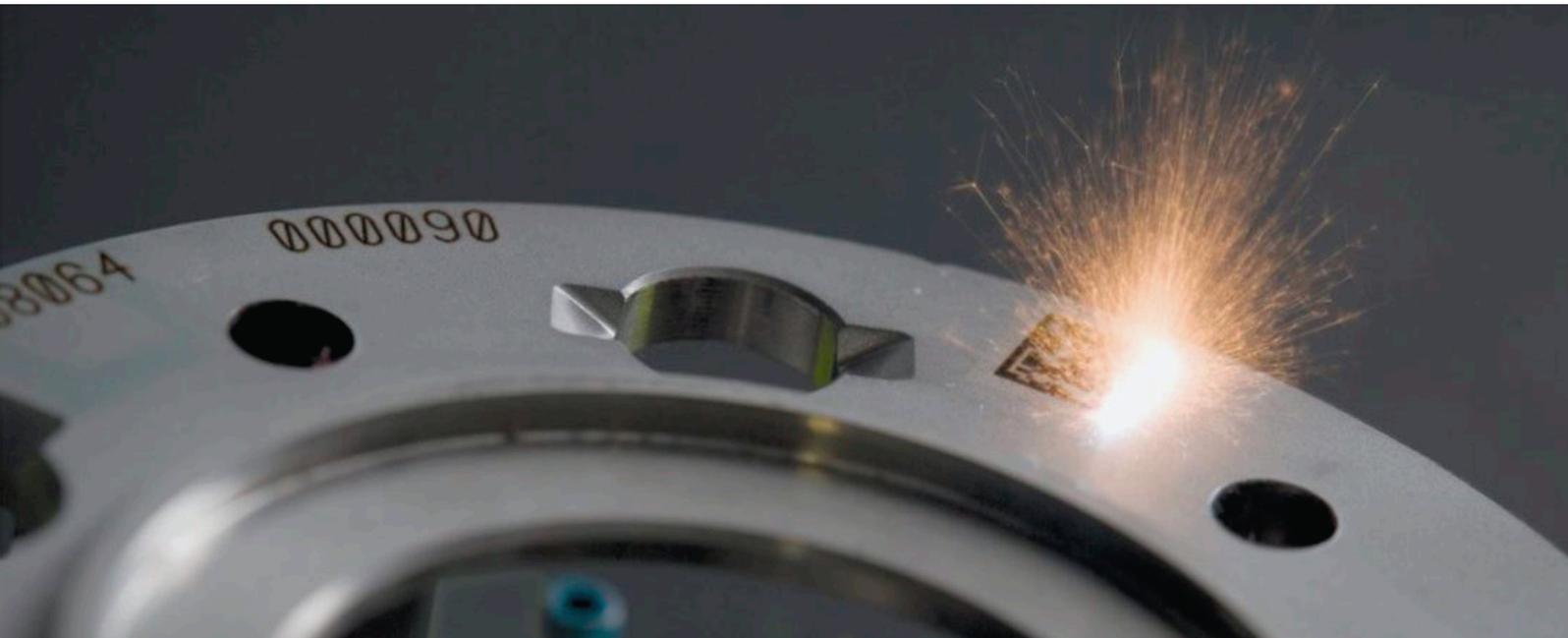
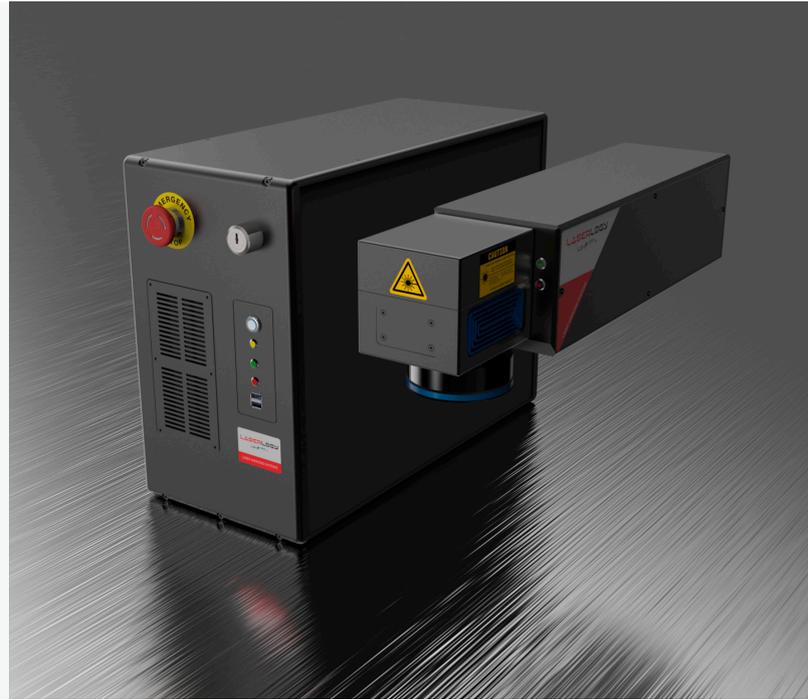
QUALITY

In our company, each employee is involved and sensitized, resulting in high quality products and high level service. Technological know-how and a great sense of the important form the basis of our innovative and high quality products.

FIBER LASER TECHNOLOGY

LS-F Series laser marker utilizes a fiber optic cable that has been doped with Ytterbium (Yb) as a laser generating medium.

The fiber laser doesn't require an amplifier and offers higher performance compared to solid state lasers, making it possible to decrease the size of the marker. A high light conversion ratio also allows to reduce the power consumption compared to conventional DPSS laser markers.



HIGH QUALITY MARKING

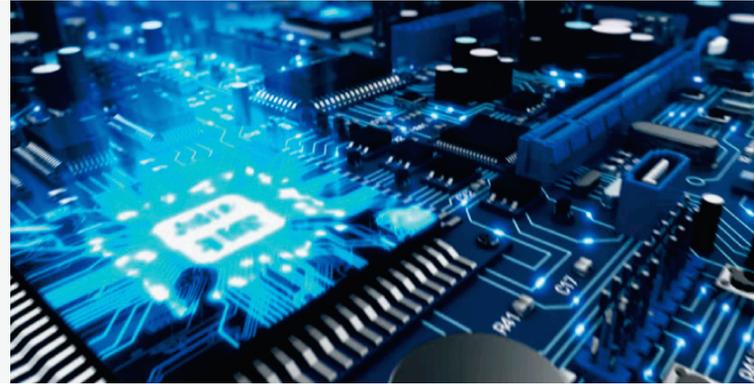
The LS-F Series takes advantage of various new technologies compared to conventional models in order to get high definition marking.

Material processing is controlled by adjusting the laser power, scanning speed and frequency for each object (line, text, logo, etc). The result is a beautiful and high-quality mark even at high speeds.

The combination of a high-speed galvo scanner and a output laser power up to 50W allows to perform a quick and accurate marking in all type of metals and a wide range of plastics.

BUILT-IN PC AND STAND-ALONE MODE

The powerful integrated computer turns the LS-F Series in the best solution for an intensive use in Stand-Alone-Mode (no external PC needed). In this way, the laser marker does not need any additional hardware when it is integrated in a machine or production line.



PREVIEW LASER SIMULATION

The well visible, red preview laser indicates the marking position in advance. This marking simulation offers the possibility to check and adjust the marking position before to executing the marking process.



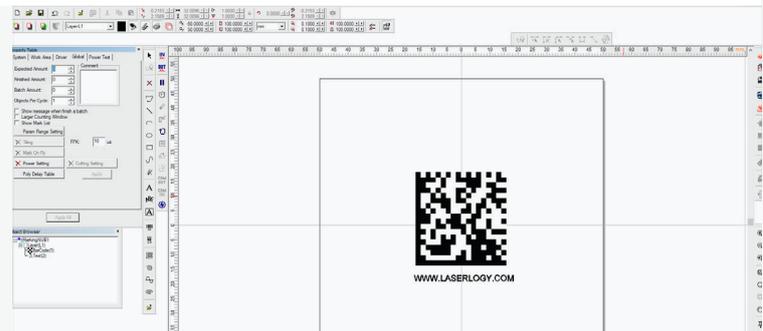
LASER SAFETY

With the emergency stop button provided on the controller front panel, the operator can stop laser source immediately in case of any abnormal condition happens. Additionally, it is possible to block the laser beam using the internal shutter of the equipment, increasing the safety of the operators.



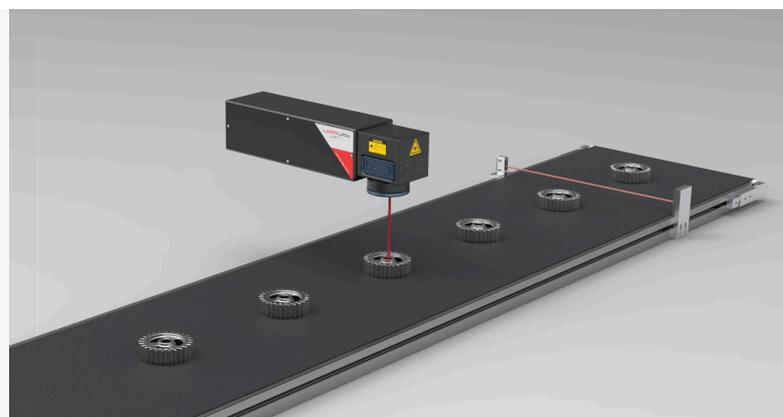
EASY TO USE

The LS-F series is designed to be as easy to use as a conventional printer. Through its intuitive configuration software in Windows environment, you will be able to create your design to mark very easily. You simply have to enter the content to mark.



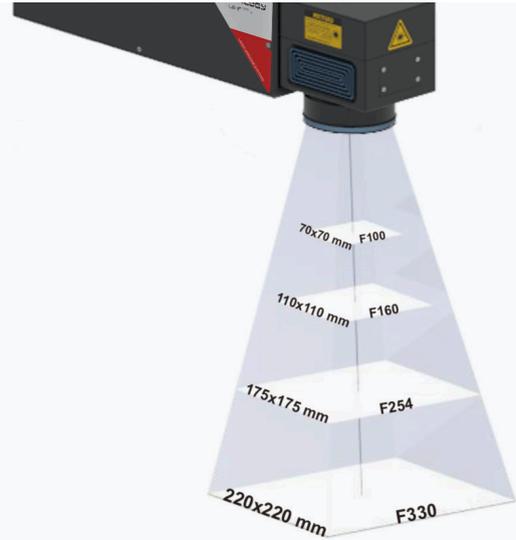
MOTF (MARKING ON THE FLY)

“Marking On The Fly” feature lets to mark moving workpieces. This type of marking is used for continuous manufacturing processes where any standstill of the production line would be uneconomical.



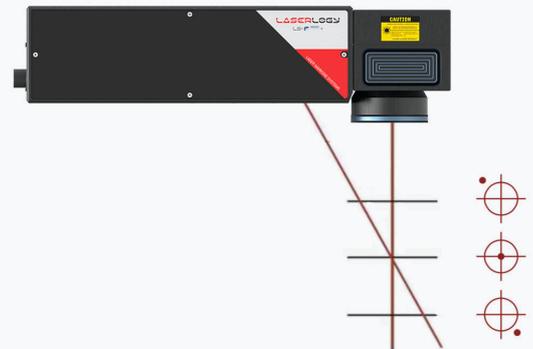
MARKING AREA

The LS-F series has 4 different optical configurations to adapt to the needs of each application. The F160 standard focal point (110x110mm marking area) offers the best compromise between work area and resolution. They are available as options, the F100 focal (70x70mm) for high resolution applications, and the F254 (175x175mm) or F330 (220x220mm) focal points for applications that need a wide marking field.



DUAL POINTER

All LS-F series devices have a second laser pointer to help focusing. The user will only need to check where the two laser pointers meet on the part to ensure that the head is at the correct working distance.



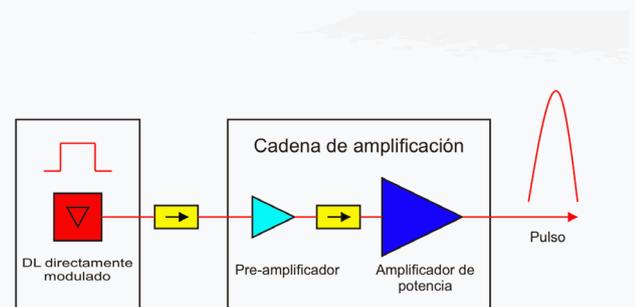
REMOTE CONTROL

The LS-F series equipment is designed for easy integration into machines and production lines, allowing its control remotely by Ethernet (TCP / IP) communications or through its In/Out port with digital signals (24V).



MOPA VERSION

The LS-20FM version integrates a MOPA (Master Oscillator Power Amplifier) laser source for better marking performance in plastic materials. MOPA fiber laser sources allow users to select (in addition to conventional power, speed and frequency settings) the laser pulse width. It is especially useful when marking some plastics and other very sensitive materials to thermal processes, thereby obtaining a final result with more quality and greater contrast.





Ablation

Removes a coating, paint or other surface treatment of a base material to create contrast without damaging the surface of the underlying material. Typically made on anodized aluminum, backlit buttons (day/night), painted metals, and FR4 printed circuits.



Etching

Ability to change the surface finish of a metal thus altering its reflectivity and enhancing contrast. Penetration depth is typically no more than 3 microns deep. One of the most common forms of laser marking.



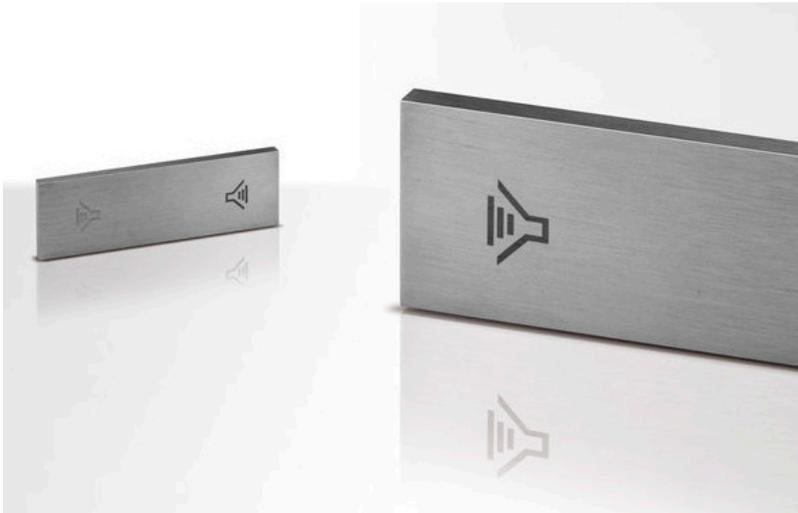
Engraving

Vaporization of the base material sufficient to produce the required depth, typically from 3 microns to 150 microns. The vaporization process is identical to surface marking. Deep engraving requires multiple passes.



Foaming

After a brief melting operation, small gas bubbles get trapped in the material as it cools. These bubbles diffuse and reflect any light that hits them, producing a high contrast mark.



Coloring

Commonly used with plastic materials. The contrast can be obtained in some plastics by contact with heat or by coupling a wavelength that causes a chemical change. It is possible to use chemical additives with most plastics to achieve different colors.

Annealing

Laser annealing produces permanent heat-induced marking, without the removal or alteration of the material. This process applies to all metals that contain carbon and that alter its color under thermal action. Excellent for applications that require smooth and undamaged surfaces.



Surface treatment

Surfaces are structured or cleaned for a specific purpose using lasers. For example, laser processing can be used to remove layers of oxide, oil or phosphate in preparation for subsequent processes.

Other process

It is also possible to process materials of organic origin (leather, wood, cardboard, etc.), thanks to the ranges of CO2 markers. Processes such as cutting, welding, sealing and marking available in different formats.

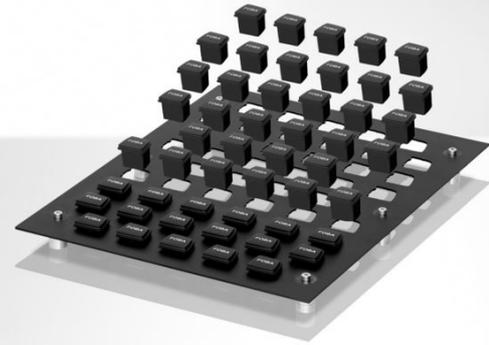
AUTOMOTIVE PARTS



Injected Plastics



Injected Plastics



Injected Plastics



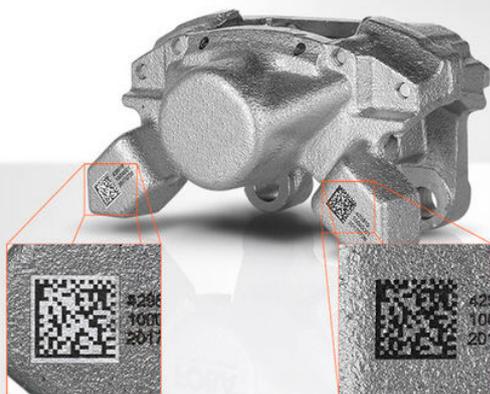
Injected Plastics



Lacquered Aluminum



Injected Plastics



Injected Aluminum

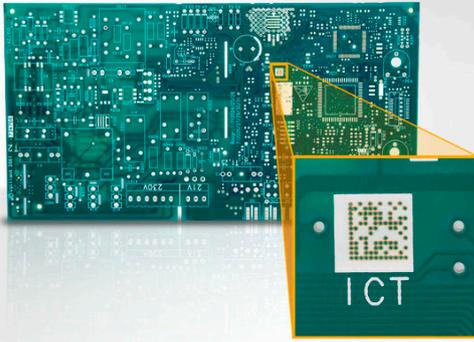


Stainless Steel

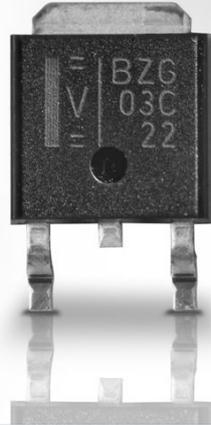


Tempered Steel

ELECTRICAL AND ELECTRONIC COMPONENTS



PCBs



SMD Components



Anodized Aluminum



Plastics (PA)



Plastics(ABS)



Plastics (ABS)



Plastics (PE)



Plastics (ABS)



Plastics (ABS)

CHARACTERISTICS

Know all the details and characteristics of our equipment. If you need to expand this information or learn more about our equipment, contact our support service.

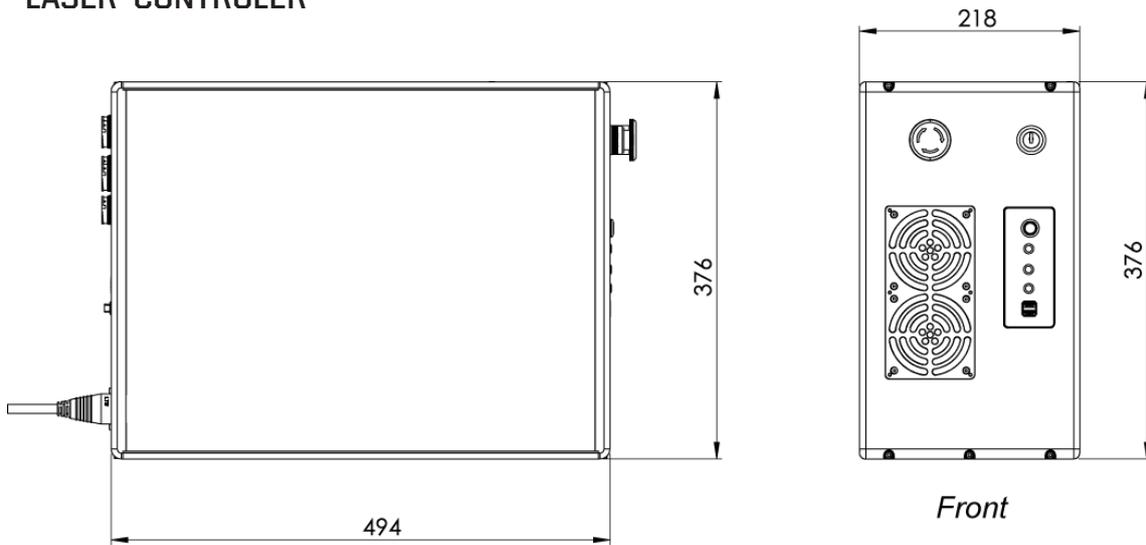


	LS-20F	LS-20FM	LS-30F	LS-50F	LS-50FM
Laser Power	20W	20W - MOPA	30W	50W	50W - MOPA
Frequency	20-80 KHz	20-500 KHz	20-80 KHz	20-80 KHz	20-500 KHz
Laser type	Ytterbium-doped fiber				
Marking area	70x70mm, 110x110mm, 175x175mm o 220x220mm				
Wavelength	$\lambda = 1064\text{nm}$, class 4 laser				
Laser guide	Semiconductor $\lambda = 655\text{nm}$, laser class 2; 1mW				
Marking method	Galvanometer scanning				
Max. scanning speed	12000 mm/sec				
Software	LogyMARK				
Type of characters	Capital & small characters, numerals, symbols, and other special characters				
Barcodes/2D codes	CODE39, CODE128, ITF2/5, NW-7, JAN/UPC/EAN, RSS 14, RSS limited, RSS expanded (GS1 Databar), GS1 Data Matrix, QR, Micro QR, Data Matrix (ECC200), etc.				
Logos/Graphics	VEC, DXF, BMP, HPGL, SVG, JPEG, AI, EPS, etc				
Ambient temperature	0 to +40°C (no condensation or frost), storage: -10 to 60°C				
Ambient humidity	35 to 75% RH (no condensation or frost)				
Cooling method	Forced-air cooling				
Supply voltage	90 to 132VAC or 180 to 264VAC, 50/60Hz				
Power consumption	< 500W				
Communication ports	Digital I/Os, Ethernet (TCP/IP)				
Fiber cable length	2,5 meters (Other lengths on demand)				
Marking condition	Static and Marking on the fly				
Head weight	7 Kg				
Controller weight	25 Kg				

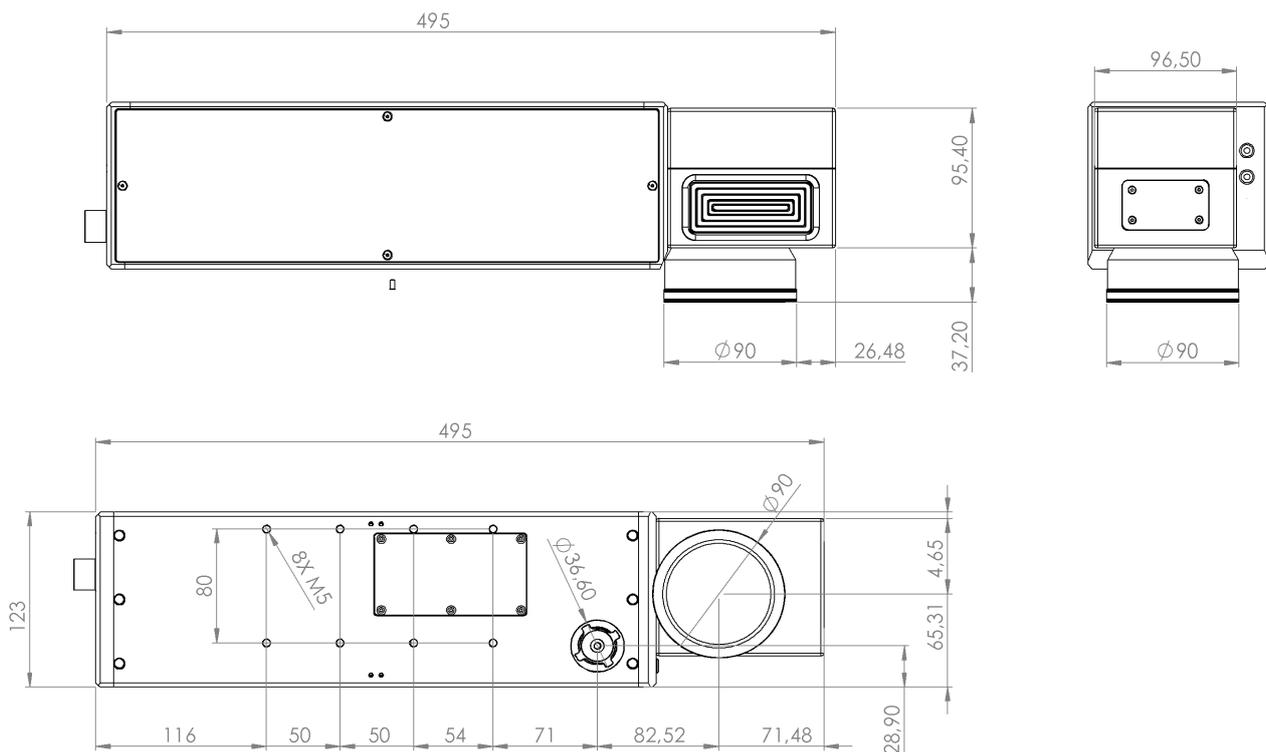
DIMENSIONS

Compact and easy to integrate into your machine or production line. Check the dimensions or request the 3D files to verify your project

LASER CONTROLER



LASER HEAD





LASERLOGY

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