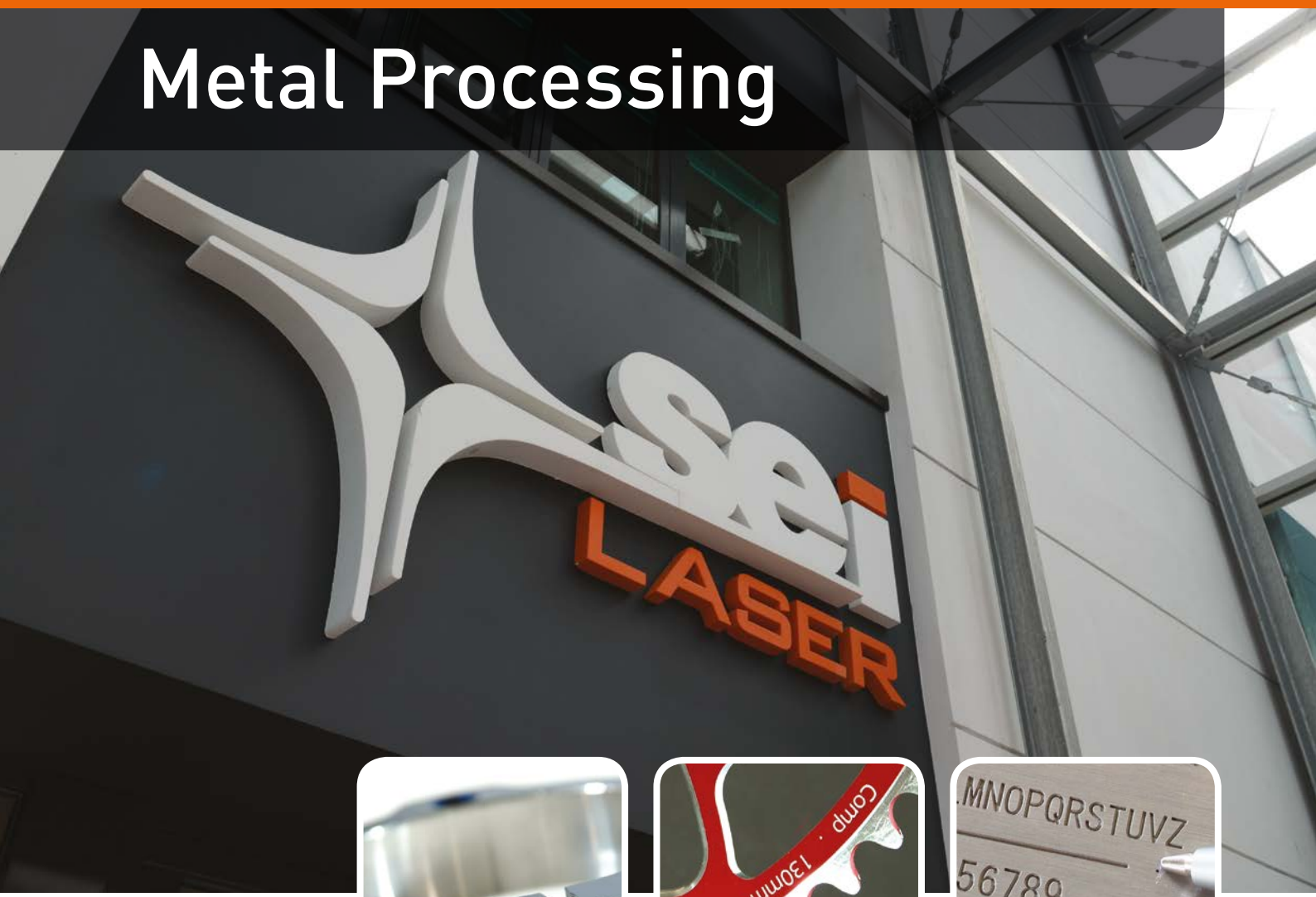
sei LASER

Metal Processing



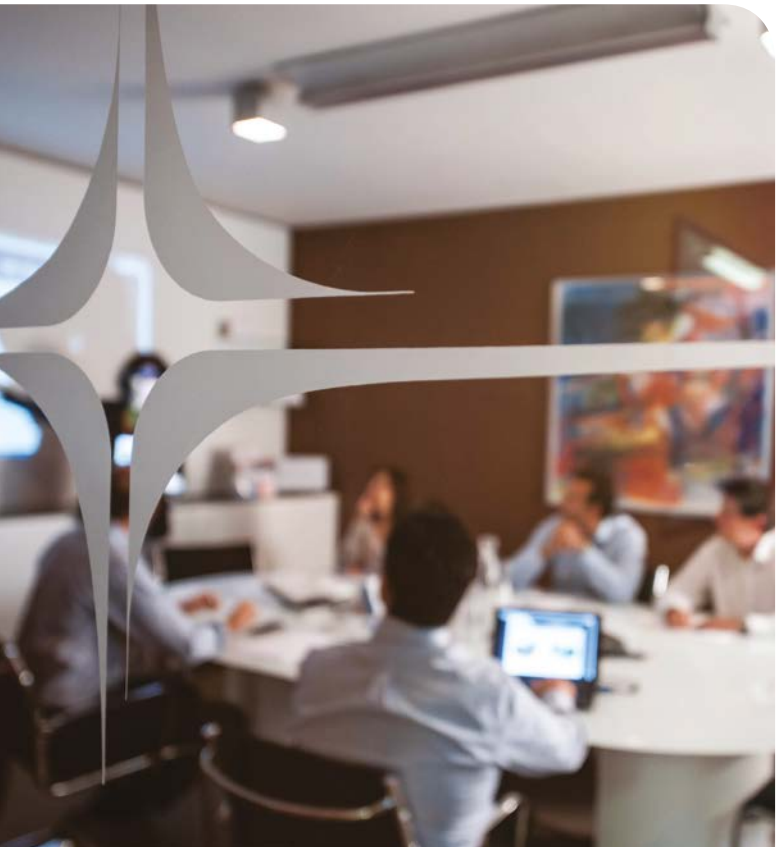
Company

Since 1982 we are the partner who offers innovative solutions to our customers to satisfy the specific market's requirements. Thanks to our know-how and continued investments, we provide laser systems that guarantee significant performances in terms of cost, operational efficiency and final quality product.
Thanks to the complete range of laser systems developed by our R&D department, SEI Laser is able to satisfy the application needs of customers in both vertical and horizontal markets, including: Engineering, Precision Mechanics, Metal processing and Electronics, Lighting, Visual Communication, Graphic Arts, Paper Converting, Labelling, Flexible Packaging, Folding Carton, Fashion, Interior Design, Furnishing, Automotive.

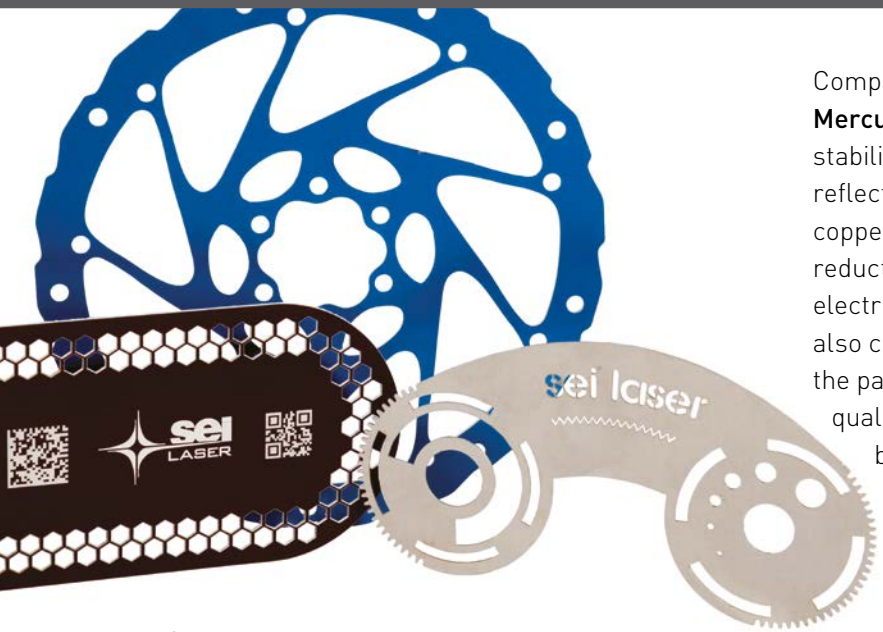
We produce our laser systems in Curno and Buja production sites thanks to 5 departments (mechanical, electronic and optoelectronic, software, mechanical design and production) which follow all the stages of the production process.
The software and firmware that control our laser systems are developed by our Software R&D Department that satisfy the different customers' requests in real time. A state-of-the-art technology requires commitment; our history is based on loyalty and mutual respect with customers. This alchemy enables us to establish strong connections with our customers which last for decades and constantly renewed.

VISION

We work so that our innovative solutions help find new opportunities and new business for customers.
"Revolutionary Generation": this is SEI Laser.



Metal Processing



SEI Laser offers a range of laser systems for cutting and marking of metal alloys with different thicknesses to the metal sheet processing market. The laser technology allows unparalleled levels of precision and quality, with high productivity and competitive prices which are essential elements for making finished products with high added value. The flexibility of the laser technology (especially the Fiber technology), satisfies different requests such as high precision, constant repeatability, reduced thermal impact during the cutting process in Automotive, Medical, Visual Communication, Specialized Mechanics, Flexible Dies, Engineering, Fashion and Interior Design.
Among laser systems for metal processing, **Mercury Fiber** represents the state-of-the-art for ferrous and non-ferrous thin materials cutting technology as it combines superior performances and extreme precision of its linear motors with a light and a compact mechanics that allows it to be easily and rapidly installed in any production site.

Compared to the traditional CO_2 laser systems, **Mercury Fiber** offers higher speed, accuracy and stability of the cutting process even on highly reflective metal alloys (such as aluminum, brass, copper and silver) combined with a significant reduction in operating costs thanks to the reduced electrical consumption and zero maintenance. It is also characterized by the extreme simplicity of use, the particular efficiency and versatility in high-quality cutting even in the case of small production batches, ensuring an high profitability.

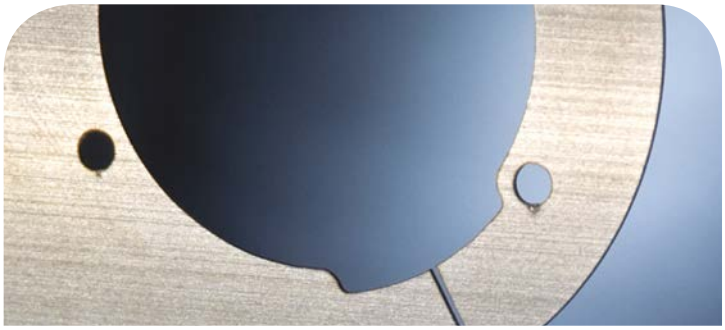
Manta Fiber, Easy Fiber, G8, Laser^3 and Mercury complete the SEI Laser range of laser systems for metal processing.

Precision and repeatability
Maximum accuracy of cutting profiles on different metals and process constancy over time.

Indelebility
Laser marking of metals is achieved in a few seconds but guarantees indelible engraving over time.

Flexibility
The laser processes different metals and thicknesses to satisfy the application requests of different industrial sectors.

Versatility
Opportunity to process unitary or small production batches.



Mercury Fiber

Mercury Fiber is a fiber laser cutting system manufactured by SEI Laser for thin metals and metal alloys processing.

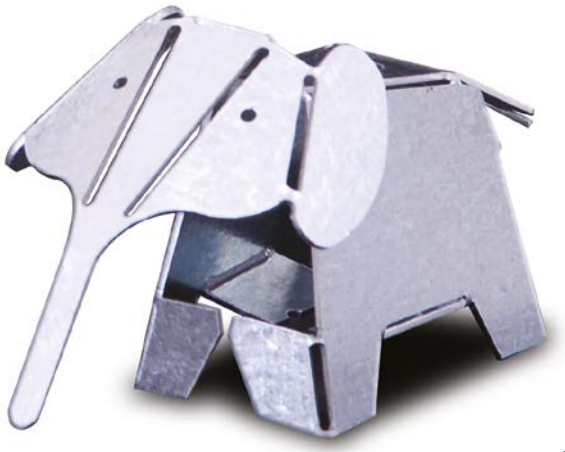
The main features of Mercury Fiber are:

- ease to use
- high precision and repeatability of the cutting edge combined with industry-leading performance thanks to the linear motors and to the control algorithms developed in SEI Laser
- zero maintenance, outstanding mechanical durability and long life of the laser source
- versatility thanks to its compact dimensions and the easy access to the three-sided working area
- flexibility due to the different configurations that make the system suitable for each environment and production site.

Mercury Fiber is equipped with high-power fiber laser (1060-1070 nm wavelenght) and with customized high-quality laser beam.

Mercury Fiber is a system certifies Class 1 which keeps the working area safe and clean. The system is equipped with an automatic telescopic opening and closing cover, windows on the front side of the system with specific protection window and a working table with fumes and dust extraction.

- Vision system for registry cutting, single or multi printing markers, 2D/3D barcode reader, RGB radial/rectangular lighting circuit.
- Rotary attachment (max. ∅ object 100 mm).
- 2nd laser head for hardening treatment.
- Live view camera.
- Waste disposal.
- Elevator and automatic mobile tables.



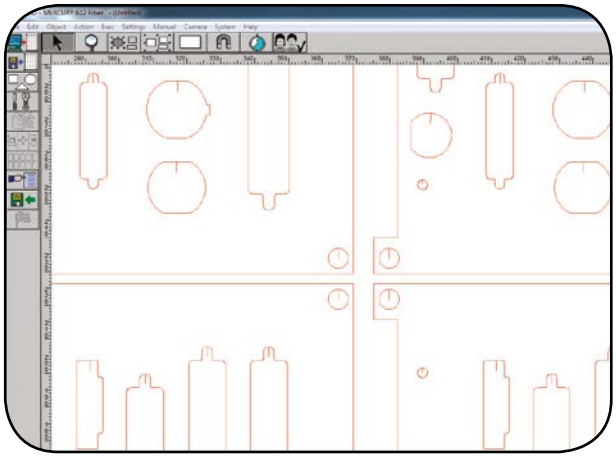
Proprietary Icaro Software

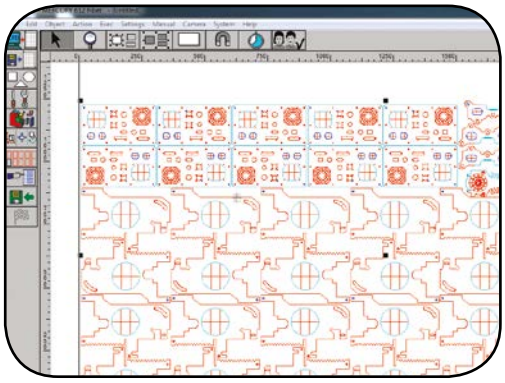
Our proprietary CAD/CAM **Icaro** software, which is extremely intuitive and userfriendly, has been developed specifically by SEI Laser for the metal process industry.
The easy import of the files, not only CAD but also the graphic ones (PDF, AI, EPS, JPG), and the easy setting of the laser parameters, make **Icaro** the powerful multifunction software 100% SEI Laser.

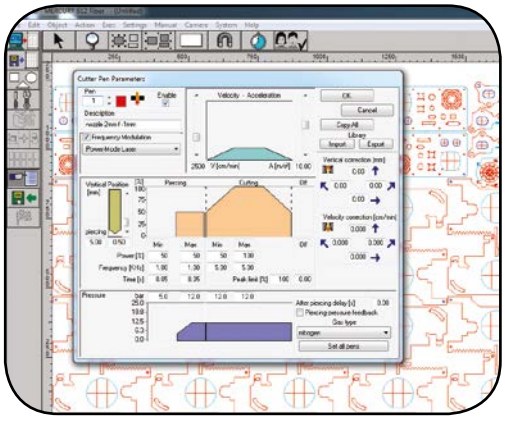
Thanks to the integration with Libellula Post-Processor, **Icaro** allows a simple, fast and intuitive job design and automatic laser system programming. The main features are: process parameters management through a database, junction and micro junction management, profile and path optimization, nesting management and optimization (ensuring high productivity with the minimum quantity of scraps), production programming, process simulation and production report.
The production cycle can be displayed before the production start-up, thanks to realistic 3D simulation to verify the right correspondence and to avoid problems before metal processing.
Icaro finally enables effective system and laser diagnostics, facilitating remote assistance operations.

Icaro: la migliore soluzione flessibile CAD/CAM per ottimizzare la produttività

Icaro: the best flexible CAD/CAM solution to increase the productivity





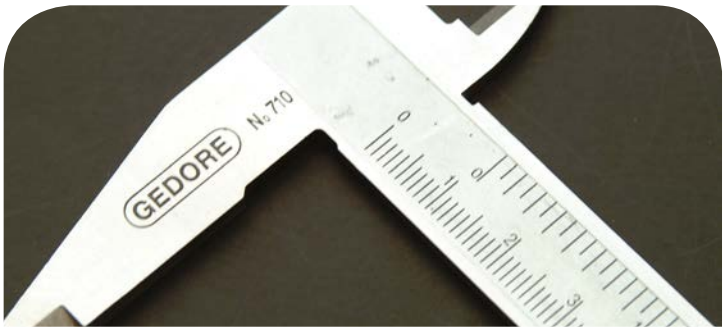


Manta Fiber

Manta is the laser system for metal and plastic marking and engraving on large area thanks to fiber technology.
The innovative SEI Laser Hi30 scanning head with four controlled axes, of which three interpolated galvanometer cartesian axes, with "full digital" electronic and the proper management of the **Mopa** (Master oscillator power amplifier) fiber laser source pulse, offer an unrivalled application flexibility.
The ability to manage and optimize the energy of each single laser pulse allows high quality engraving and marking.

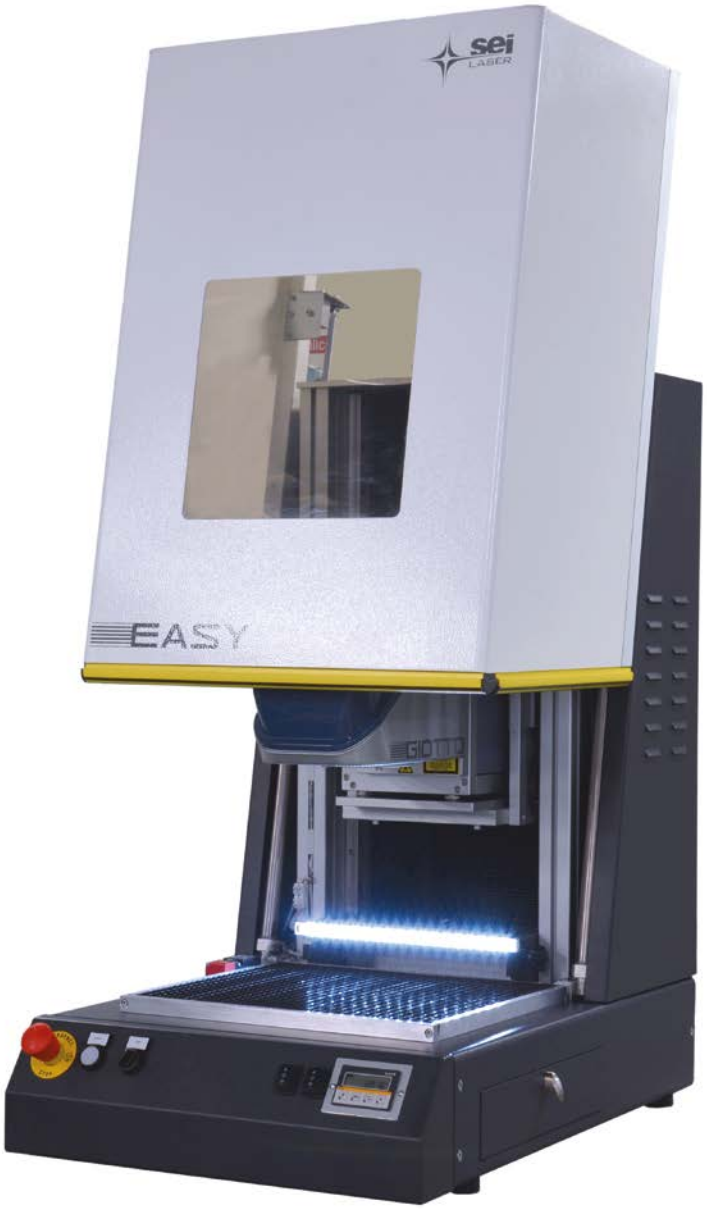
The Hi30 scanning head offers the highest quality of laser beam on a working area up to 450x450 mm, with a spot diameter less than 50 microns.
The fiber laser source, with zero maintenance, makes **Manta** system extremely reliable and high-performing.
The motorized Z axis, integrated into the structure of support, enables the positioning of the material to process at the correct focal distances.
The safety front door with vertical opening is automatic and it is equipped with inspection window.

Manta system, available with motorized sliding table (X axis), enables to process materials with a maximum thickness of 300 mm on a working area from 250x250 mm to 450x1000 mm.
It is a Class 1 product IEC EN 60825/1 norm compliant.



G8 & Easy Fiber

G8 and **Easy Fiber** are the compact laser systems for marking and engraving metals or thermoplastic materials.
Both of them are characterized by the presence of a "dynamic beam expander", which allows the dynamic programming and management of the laser spot size via software. It guarantees, thanks to also motorized Z axis which is controlled by software, high quality engraving/marking even on items with different thicknesses.
Both of them are suitable for installation in both small and industrial work environments and they are Class 1 laser systems and comply with international safety standards (IEC EN 60825/1).



The main features of G8:

- working area: 450x450 mm
- laser working area: up to 180x180 mm
- front opening for easy loading / unloading and easy access to the working area, easy opening of the side panels to process materials which are bigger than the working area
- laser technology: 20 W Laser^3.

The main features of Easy Fiber:

- working area: 300x300 mm
- laser working area: up to 180x180 mm
- front opening for easy loading / unloading and access to the 3-sided working area
- laser technology: zero-maintenance fiber laser technology.

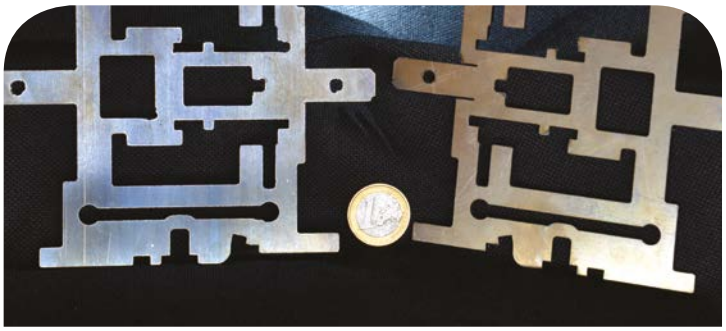
Laser³

Laser³ is an OEM designed by SEI Laser to improve the automation and the industrial processes, thanks to the integration of laser technology, as well as to allow a wide range of applications in many markets.

Laser³ is the right solution for differents sectors, such as ID-Card, pharmaceutical, electronic, Food&Beverage, automotive, mechanical, promotional items and moreover coding, traceability on metals and thermoplastics.

Laser³ is a laser marking system with DPSS "long life" laser technology (1064 nm wavelenght). The main features of this laser solution, besides a peculiar optic frame of laser beam, is the integration of the laser cavity, the scanning head and the full digital electronic control in a compact "cube".

Laser³ can be controlled via PC through the user interface ICARO (Windows) or works in "stand alone" mode (without PC).
The marking on fly ability, the complete digital I/O, the RS 232/485 serial ports and the LAN 10/100 network connection make **Laser³** the ideal laser marking system for the integration in any production line and automation.



More than metal: Mercury

Mercury is the "top of the range" professional laser system for CO_2 laser cutting and marking. It can process the following materials: PMMA, acetates, ABS, plastics, wood, leather, paper, cardboard, textiles, glass, marble, thin ferrous and not ferrous metals.
Thanks to the exclusive "metal" kit, **Mercury** combines the possibility of cutting iron and steel with non-metallic materials with the highest quality.
Mercury, that is characterized by high flexibility of use and high performances,
is available in different configurations
to process materials with a working area
up to 2000x4000 mm. It is a Class 1 or Class 4 security product (IEC EN 60825/1).

The main features of Mercury are:

- ease to use
- high accuracy and repeatability of the cutting edge combined with industry-leading performances thanks to the linear motors and to the control algorithms developed in SEI Laser
- zero maintenance outstanding mechanical durability and long life of the laser source
- versatility thanks to its compact dimensions and the easy access to the three-sided working area
- flexibility due to the different configurations that make the system suitable for each environment and production site: fixed work table, front table lifting, dual tables for loading/unloading or with conveyor for textile roll processing
- the strong mechanical structure combined with X-Y axis movement, thanks to high performing linear motors, in addition to the position controlled by linear optic encoders, ensure high and unique performances.

Why SEI Laser?

SERVICE

SEI Laser, thanks to its wide range of technical support services and its strong presence worldwide, ensures a quick, effective and tailored response to the different customer needs.
In addition to technical support on-site, SEI Laser offers a valued remote assistance.
The communication between the company and the customer, managed in real-time via chat, allows the operator to be guided step by step in the following technical operations:

- *visualization of the configuration and processing parameters*
- *configuration and modification of the processing parameters*
- *diagnostics of the laser source and the control parts*
- *file transfer*
- *software upgrade.*

OPTIMIZATION AND WORKFLOW CONTROL

SEI Laser systems are designed for metal cutting (ferrous and non-ferrous metals and high reflective alloys) for indelible marking, scribing, micro drilling and surface treatment. They are all characterized by an automatic setting of the laser parameters that avoids any mistake by the operator.
These laser systems perfectly optimize the metal processing and the material to be processed, both in sheet metal cutting and surface treatment, updating the progress of the job and generating a real-time feedback.
Every SEI Laser system can be integrated into automated digital control production processes and it is in compliance with the Industry 4.0 certification.

SEI S.p.A.
Via R. Ruffilli, 1
24035 Curno (BG) - Italy
T. +39 035 4376016
F. +39 035 463843
info@seilaser.com
www.seilaser.com

SEI Deutschland Gmbh
Moosweg 9
D-82386 Huglfing - Germany
T. +49 8802 913600
F. +49 8802 9136066
info@seigmbh.de
www.seilaser.de

SEI Laser France
12 Quai du commerce
69009 Lyon - France
T. +33 4 26 10 08 23
france@seilaser.com
www.seilaser.com

SEI Laser Systems (Hangzhou) Co. Ltd.
Hangzhou Hi-Tech Park,
Bin Jiang District, Bin An Road
#1193, Post Code 310052
Hangzhou - China
T. +86 571 8777 4111
F. +86 571 8777 444

SEI Laser Converting
Via Praz dai Trois, 16
33030 Buja (UD) - Italy
T. +39 0432 1715827
F. +39 0432 1715828
info@seiconverting.it
www.seilaser.com