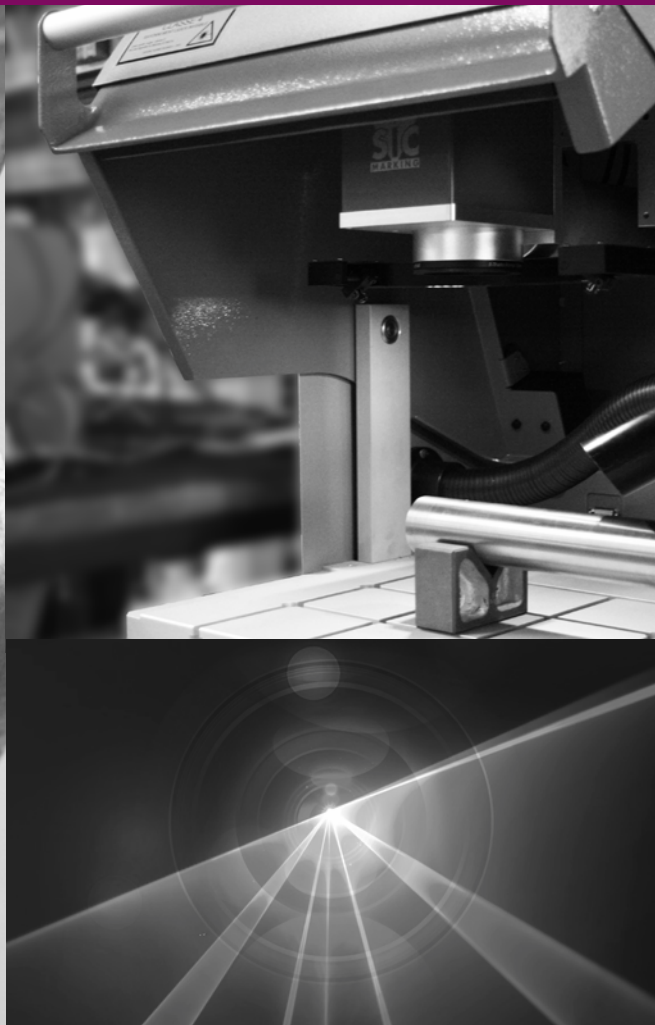




FIBER LASER RANGE



sic-marking.com

WHO ARE WE?

We are a global specialist in marking and traceability solutions.

SIC Marking is **an international group** developing permanent marking solutions and automatic reading systems (Datamatrix) for the traceability of industrial components.

With 20 years of experience, SIC Marking develops traceability applications for a wide range of materials such as steel, alloys, stainless steel, titanium, aluminum, and plastics.

Today we work with professionals in various industries such as: automotive, aerospace, metallurgy, mechanical engineering, plastics processing, railway, medical, construction, defense...

With an **experienced, responsive and involved team**, SIC Marking offers a complete range of standard products, and custom machines to meet all your needs.



150 Employees



30 Million € Turnover



10% Annual growth



Installed base of 40 000 machines worldwide



More than 10 000 customers



Large Patents Portfolio



10 new products in the last three years



10% of the Turnover invested in R&D



AT YOUR SERVICE



SUPPORTING YOU ALL OVER THE WORLD



Subsidiaries in Germany, Canada, USA, China, South Korea and a network of over 40 distributors...



OUR CENTRES OF EXCELLENCE

SIC Marking Group includes:

- A **Research & Development department**
- A multi-expertise **Design office** that creates custom-engineered equipment (mechanics, information technology, automation),
- A structured **After-Sales service** that offers technical assistance, training for your technicians and maintenance of your equipment,
- A Marking and vision **test laboratory** that provides samples for your applications,
- Technical support with **training sessions**, and local set up of the equipment,
- **Local distributors that supply spare parts** for an optimal and efficient service.



OUR TECHNOLOGICAL APPROACH

«Quality, performance and innovation.»
reflects SIC Marking's philosophy.



THE FIBER LASER



Aesthetic



Endurance



Speed



No maintenance

To meet the ISO quality requirements, traceability is essential. This the reason why laser marking is used by manufacturers to automate marking operations and thus **guarantee 100% control of their processes.**

This laser marking technology consists on **releasing radiation from a source.** It is then amplified through a optical fiber and directed through a galvanometric head toward the part to be marked. The beam focused on the material by a lens creates a marking chemical reaction.

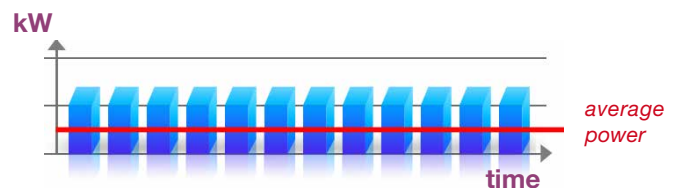


Ytterbium doped
fiber source.

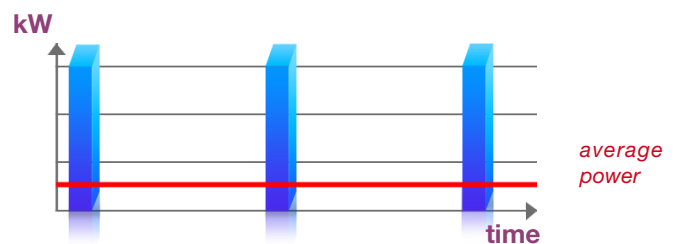
collimator

This technology is mainly used for permanent marking **on all types of materials**, from plastic to metal parts, irrespective of their hardness or surface finish. The laser is recommended for **high speeds and high quality markings.**

The advantages of a fiber source:



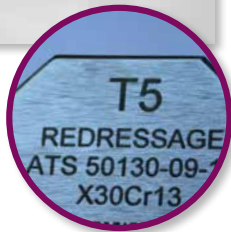
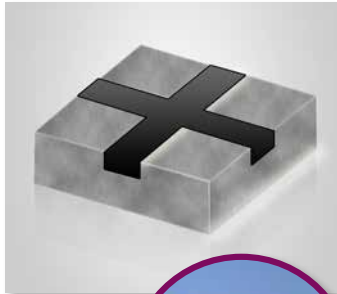
- Marking at reduced peak power
- High frequency
- Marking does not distort the material



- Marking at high peak power
- Low Frequency
- Strong interaction with the material

MARKING METHODS

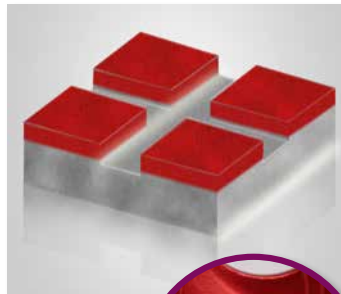
Surface condition respected (high contrast)



Powerful marking with oxidation (foaming)



Removing layers



Removing material (engraving)



TYPES OF MARKING



SIC

Single line



SIC

Double line



SIC

Hatched

TYPES OF SURFACES



Flat marking



> Radiant



> Straight

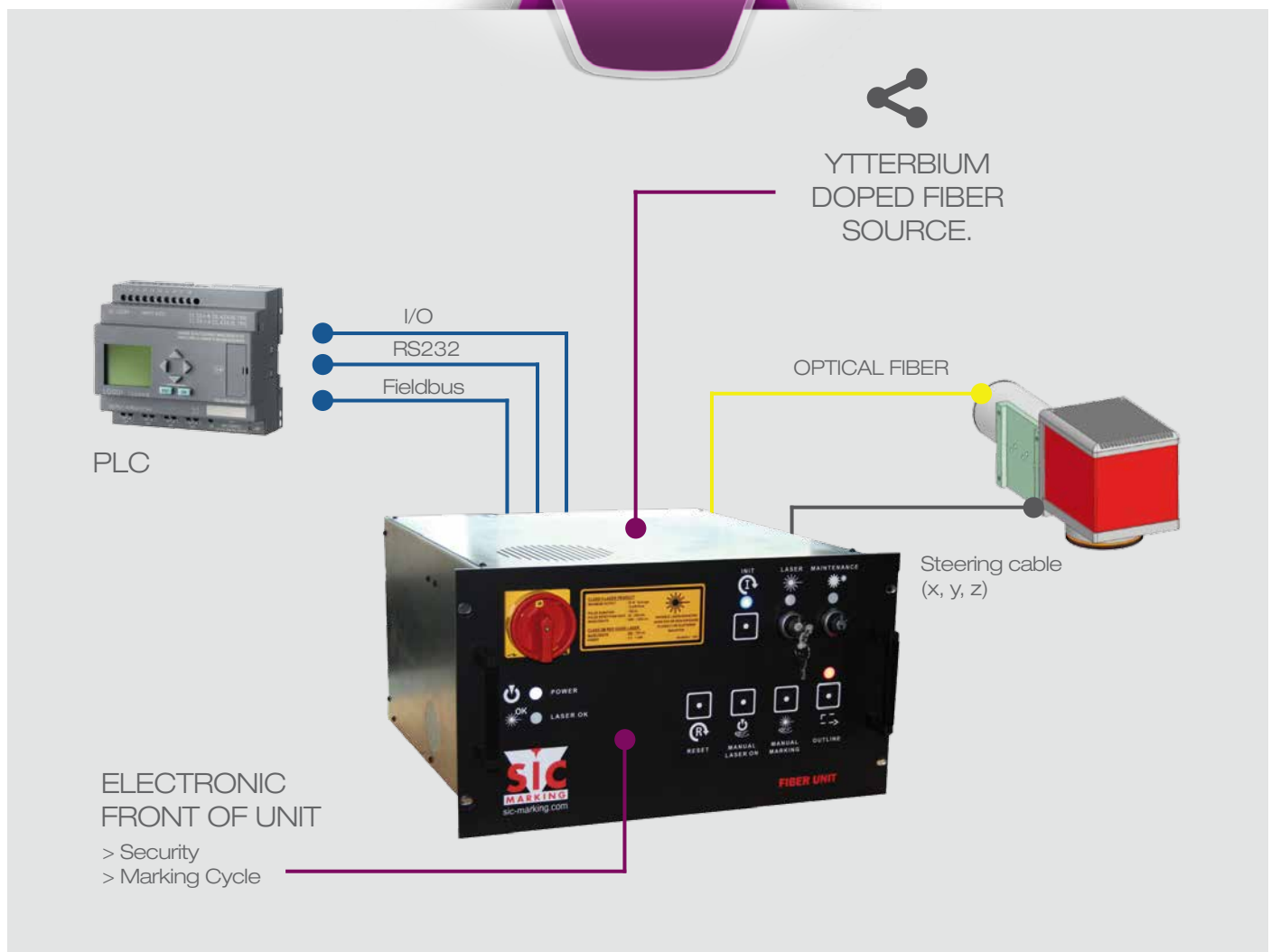


Marking on circumference



Curved marking

OUR CONTROL UNIT | FIBER UNIT



STRENGTHS OF THE FIBER UNIT

■ Reliability and performance

- Long-life components ($\geq 100\,000$ h)
- Control of digital axis (linear or rotating)

■ Steering

- Laser driven by «SIC LASER» software
- USB interface, Windows environment

■ Compact

FEATURES

- Operating method: pulsed (20-200 KHz)
- Consumption: 750 W
- Wavelength: 1 064 nm
- Average power: 20 W to 50 W
- Peak power: 10 kW
- Cooling: air only
- Warranty: 24 months
- Extended 5 year warranty option

SECURITY

■ The NF-EN 60825 standard



The NF EN 60825-1 / A2 standard for the safety of laser products provides information on the classification of lasers for security, laser safety calculations, risk control measures, recommendations for laser safety managers

and for corporate hygiene and security committees. For laser products manufacturers, the standard provides a reference for the compliance of installations. All laser products sold by SIC Marking meet this standard.



■ Integrated security

- Unit certified by a specialised organisation
- Emergency stop
- Laser safety enclosure

■ Marking workstation

- Class 1 machines
- CE certified equipment

■ Integrated laser

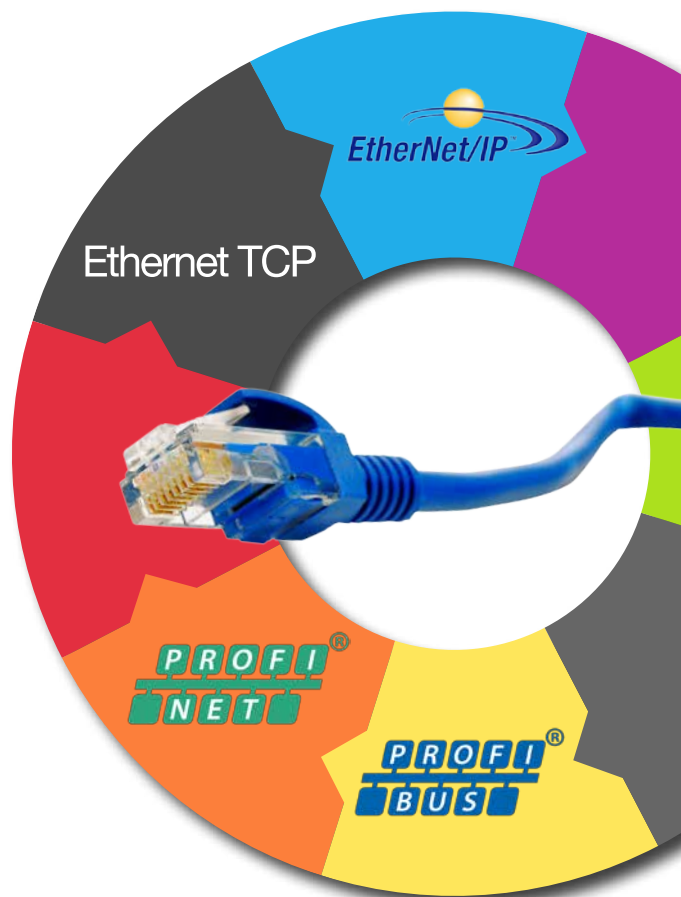
- Class 4 laser
- For an integration on a production line with adapted security rules

COMMUNICATION

SIC Marking systems can be connected to industrial networks without any additional equipment.

Already equipped with full connectivity (digital I/O, Ethernet TCP/IP, RS232...), our systems also offer many features to interact with all the elements that set up their environment. Our machines can be easily integrated on all production lines using Profinet, Profibus and Ethernet/IP.

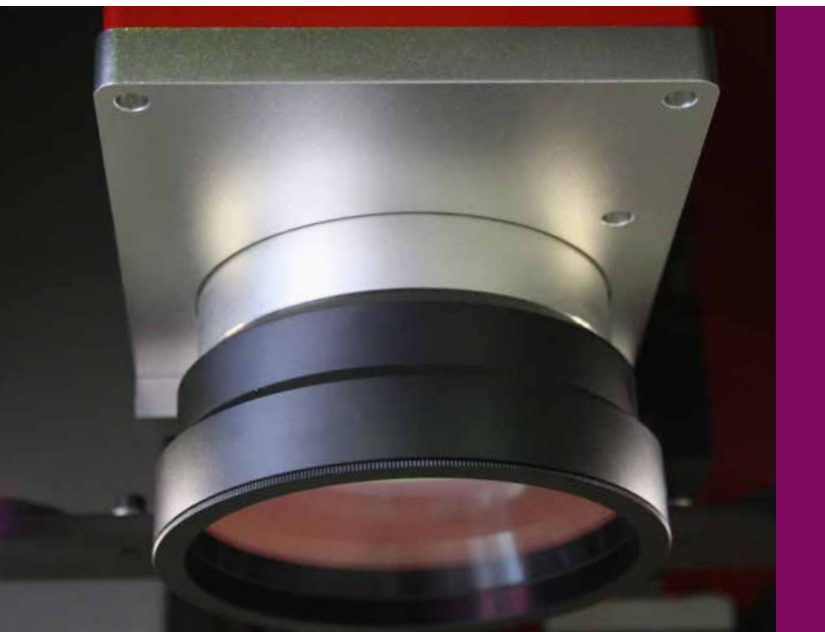
Direct connection to the industrial network without use of a gateway provides considerable time savings. It also reduces the cost of machinery installation, of engineering and of commissioning.



OUR INTEGRATED LASERS

i103 L-G

**20W to
50W**



This laser is designed to mark at a high speed with an extremely low operating and maintenance cost. Thanks the robustness of its components, it works in any industrial environment. This unit can mark all alphanumeric characters, logos, standard 1D and 2D codes, with accuracy and contrast.

The compact design of the marking head facilitates its integration.



**Marking speed and
precision**



Easy integration



20W to 50W source



All materials

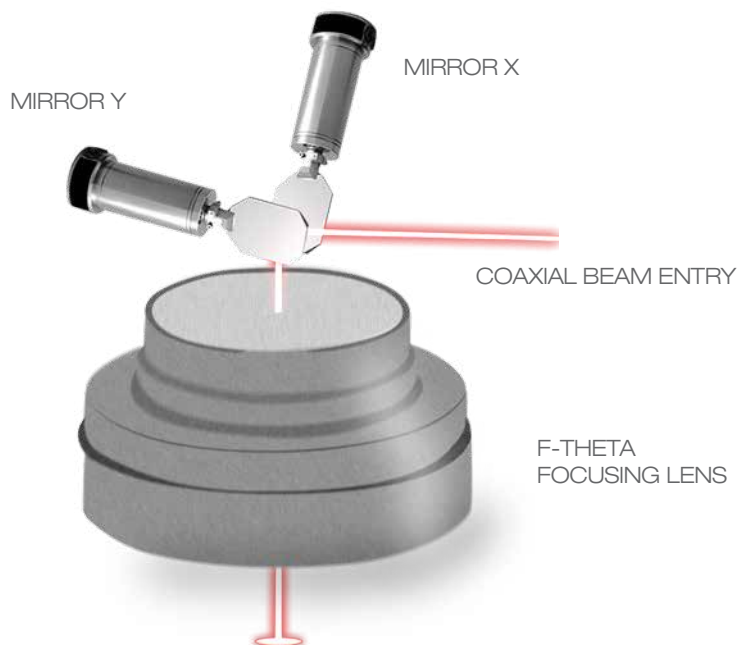


Low maintenance



GALVANOMETRIC HEAD

The laser beam passes through the collimator, to be directed to two oscillating mirrors. Each of these mirrors is an axis of the marking field. At the head's exit, the focusing lens concentrates the power in a single point.

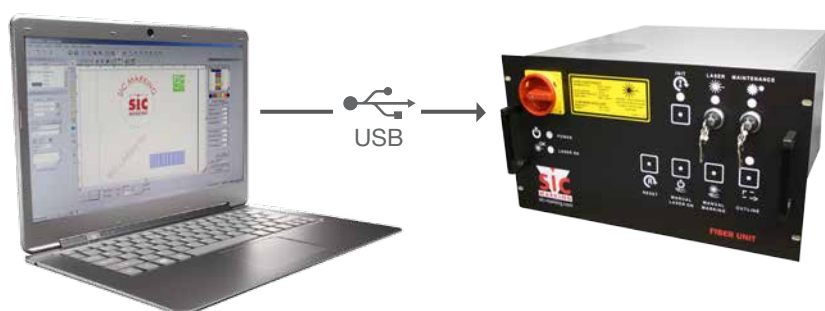


TECHNICAL FEATURES

i103 L-G

Marking head	100 x 100 mm up to 210 x 210 mm
Weight	Control unit: 19 kg - Head: 5kg
Consumption	750 W
Security	Laser Class 4 (EN 60825-1) 
Programming	«SIC LASER» software
Diameter of the laser spot	30 to 40 µm

PROGRAMMING MODE



■ File Creation on PC

- Creation of entities to be marked: characters, logos, 1D or 2D coding, Datamatrix
- Font choice «True Type»
- Pen setups

PRODUCTION MODE



PLC

OUR MARKING WORKSTATIONS

L-Box
XL-Box

Our laser marking systems are designed to increase productivity on stations dedicated to marking and traceability of components. They are equipped with a ytterbium doped fiber source.

The choice of the station depends on :

- the ergonomics of the workstation (manual or automatic),
- the production rate,
- the size of the parts to mark.



Ease of use



Ergonomic manual station



Opens on 3 sides



Internal work area of
370 x 450 mm



Large capacity



Automatic door



Motorized Z axis



Wide opening on 3 sides



Internal work area of
570 x 564 mm





KEY FEATURES

■ Robust and reliable

- Suitable for industrial work environments
- Low maintenance
- Warranty up to 5 years

■ Performances

- Marking on all types of materials, difficult surface conditions
- Superficial or deep marking
- Precision of marking

■ Security

- Secured closure of the box, class 1 (EN 60825-1)

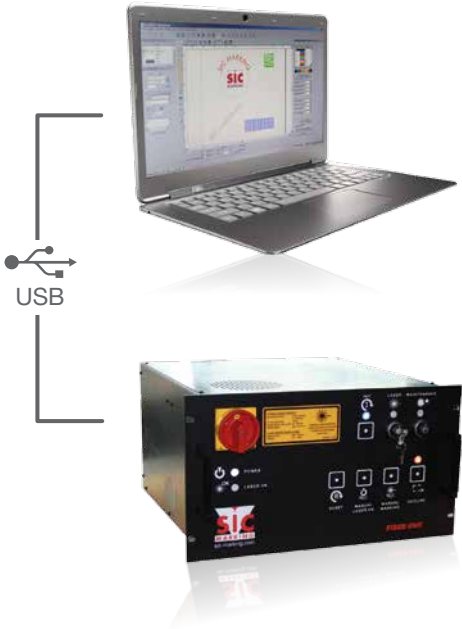
■ Confort

- Ergonomic door: natural movement and effortless
- Access to the marking area by three sides
- Beam viewing window
- Visibility of the work area
- LED lighting of the marking area

«SIC LASER» SOFTWARE

Function	Creation and marking file editing (drawing, text, bar code, Data Matrix code ...)
Laser settings	Defining multiple pens (speed, power, frequency ...)
Fonts	All TrueType fonts for PC
Encryption	1D Barcode and 2D codes (Datamatrix)
Image	Import of image files (.bmp, .jpg)
Logo/Illustration	Import of vector files (.plt, .dxf, .ai)
Data base	Link with external files (txt, xls)
Cylindrical parts	Marking function of rotary axis

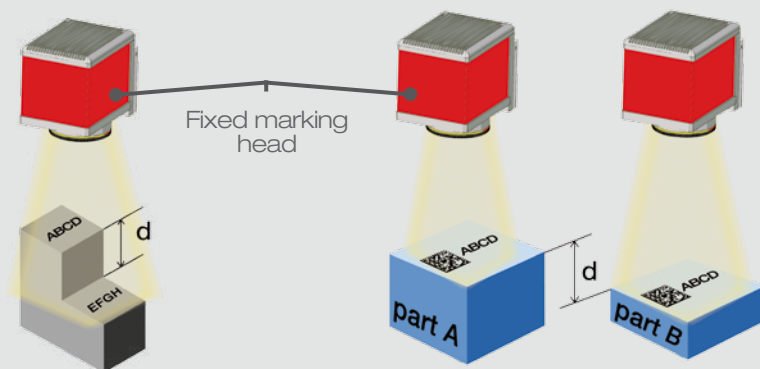
PC WITH SIC LASER SOFTWARE



OUR OPTIONS

i103 L-G
L-Box
XL-Box

AUTOMATIC ADJUSTMENT OF THE MARKING AREA

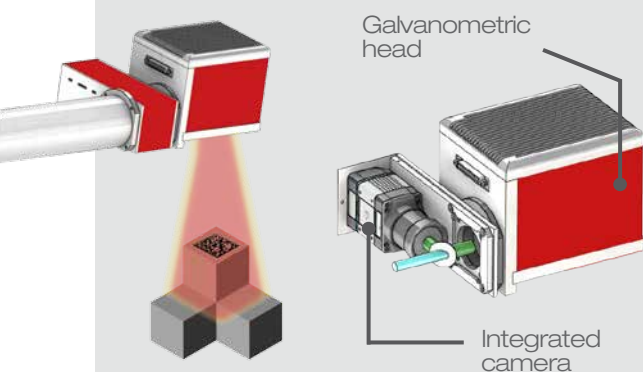


- Marking of one part on two different height levels.

- Marking of parts on different heights in the same production series.

VISION SYSTEMS

SIC Marking's identification systems allow the reading of all types of characters (1D, 2D codes and alphanumeric characters). With its unique expertise, SIC Marking ensures a full service of marking / reading systems. SIC Marking is also developing marking analysis softwares and softwares to backup data (historical, image, reading report...).



Integrated vision system



Deported vision system



Portable readers

ACCESSORIES FOR MARKING STATIONS

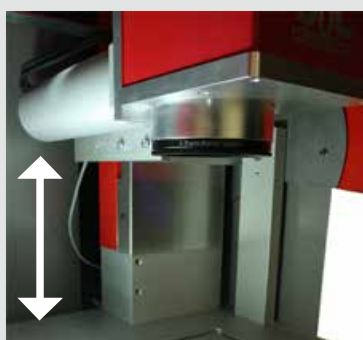


Rotating platter

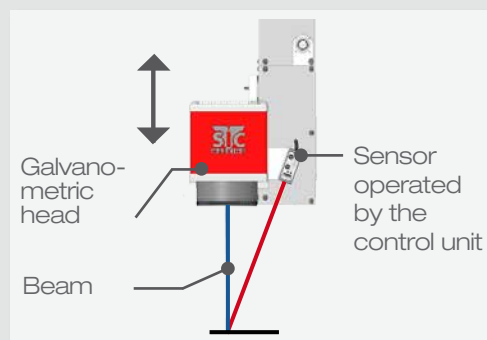
- The rotating plate (manual or automatic) allows an increase of productivity for the marking of parts in small and medium series.



Rotating axis



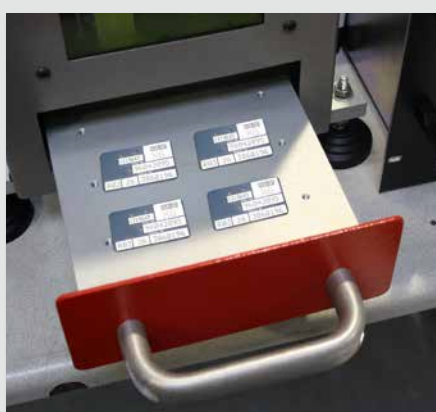
Motorized Z axis



Automatic detection of parts



Extraction and filtration systems



Part loading drawer



Chassis for marking station

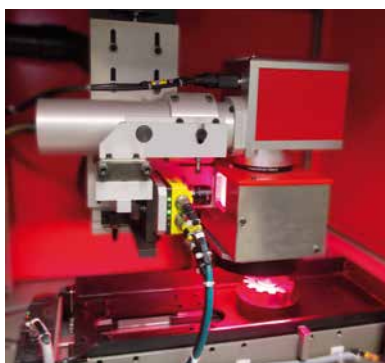
OUR CUSTOM APPLICATIONS

COMPLETE TURNKEY WORKSTATIONS

With an experienced, responsive and involved team, SIC Marking designs customized, turnkey solutions for all industrial sectors. Our design office produces machines in compliance with your specifications and your industrial standards.

We make changes to our standard workstations (resizing, adding movements...) or create specific systems to meet your specifications.

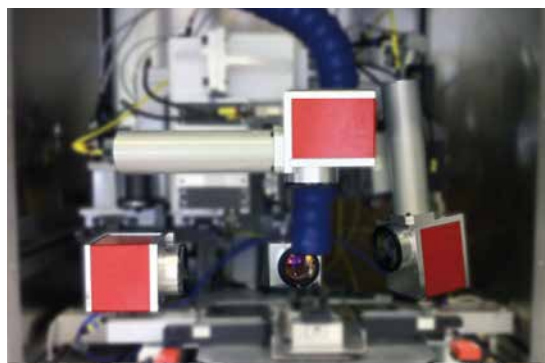
CUSTOM INTEGRATIONS



Laser station equipped with a loading drawer and a dedicated reading system



Protective sleeve for laser



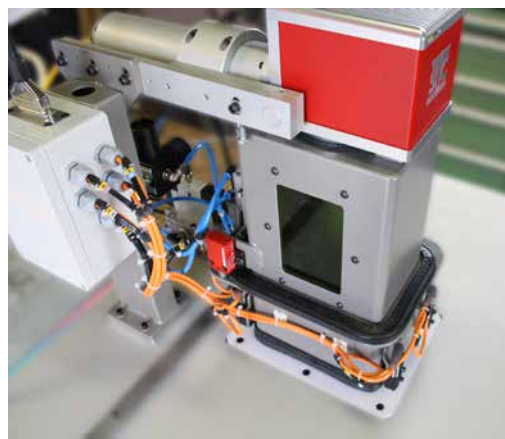
Simultaneous marking with a 4 head laser

MARKING AND READING



XL-Box marking station with deported reading system

SECURITY



i103 LG laser with a protective sleeve for manual marking of steel plates.

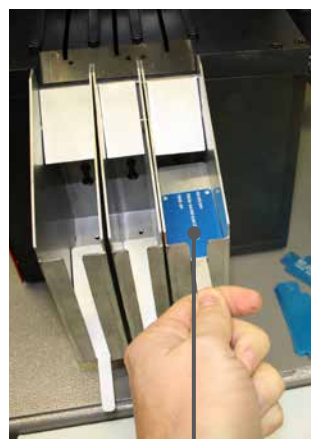
AUTOMATIC NAMEPLATES CHARGERS



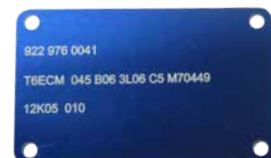
Loading area for blank plates



Marking zone



Stacking tub for plates

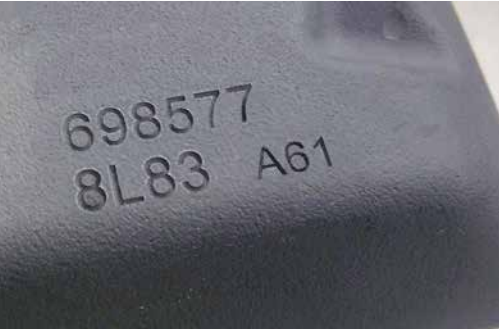


CUSTOM WORKSTATIONS



DIFFERENT TYPES OF MARKS

Steel



Deep marking on steel



High speed steel



Treated steel

Plastics



Aluminum



Cast aluminium



Painted aluminium



Anodized aluminium

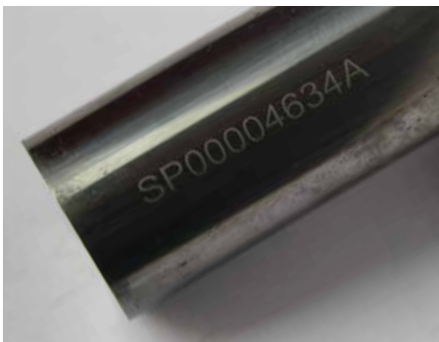
Various



On metal sheet



On ceramic



On carbide



On rubber

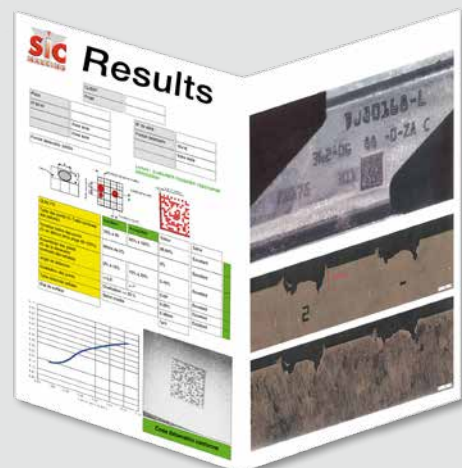


On a painted part

OUR TEST LABORATORY



■ Free tests



■ Marking and reading feasibility studies

OTHER TECHNOLOGIES

DOT PEEN



Our dot peen technology is known and approved, it has allowed SIC Marking group to become a world leader in industrial marking.

This type of marking is made by a succession of impacts or points. The force is transmitted by a controlled electric pulse through a coil, which powers the magnetic assembly and its stylus towards the surface.

We offer a complete dot peen range with portable, column mounted or integrated systems.



• Portable Range



• Column mounted Range



• Integrated Range

SCRIBING



This technology is required mainly in applications where the noise level in the working environment is decisive. Scribing ensures a permanent marking of high quality, ideal for example for OCR reading

applications (Optical Character Recognition).

Our integrated marking machines are designed to be placed at the heart of the production lines and can also be adapted to specific needs, such as VIN marking (Vehicle Identification Number).

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