

# LASER MARKING SYSTEMS

Integrated heads



LASER



## Laser RANGE

- i103 L-G ■ 10W
- 20W
- 50W





## LASER TECHNOLOGY: FAST AND HIGH QUALITY MARKING ON ALMOST ALL MATERIALS !

Part traceability is essential for compliance with quality standards. Laser marking allows manufacturers to automate marking operations and ensure a high level of control.

The laser technique consists in generating a beam from a laser source, amplifying it and directing it to the part via mirrors. The energy delivered by the laser changes the surface of the material under the focal point. It may heat up the surface and subsequently vaporize the material. This is how material is removed from the surface to create a marking or an engraving.

The fiber laser technology -Ytterbium pulsed-is a cutting edge solution for marking : high performance, robust, easy to set up, without maintenance cost. This technology is used for Direct Part Marking (DPM) or label marking on almost all materials regardless of hardness or surface textures. Laser is recommended for high-volume production, where speed and accuracy are essential.



## INTEGRATED SYSTEMS : NO PC REQUIRED

Our integrated laser systems are designed for intensive use in stand-alone mode -without PC-. They can be integrated on production lines or used as stand-alone marking station. These systems can fit with low rate production, and even high rate production with additional tooling and customization. Change size of the body, manufacture dedicated tooling system and additional moving axis (Z and rotary axis) can be done on asking.

## HIGHLIGHTS .....

### ■ Robustness and reliability

- Extended component life expectancy > 100 000 h
- Reduced maintenance
- Warranty up to 5 years

### ■ Performances

- Marking on all types of materials
- Surface or hollow marking
- Standard 1D (bar codes) and 2D (DataMatrix) code capability
- Marking high definition logos and images
- High quality marking
- Deep marking

### ■ Security

- Class 4 laser (EN 60825-1 standard)

### ■ User-friendly

- Easy to integrate with compact size

### ■ Fiber laser

- Doped Ytterbium fiber laser source of 10, 20, 50 W
- Fast and high quality marking

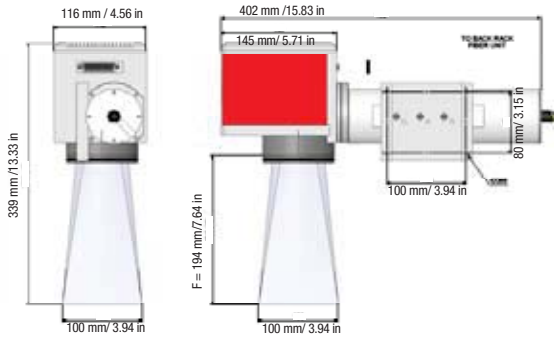
**i103 L-G 10W  
20W  
50W**



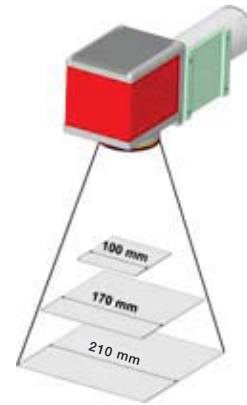
■ ADVANTAGES OF i103 L-G.....

- HIGH SPEED & HIGH CONTRAST MARKING
- Easy integration
- Sources of 10 W, 20 W or 50 W
- Marking field of 100 x 100 mm / 3.9 x 3.9 inches  
option 170 x 170 mm / 6.7 x 6.7 inches  
option 210 x 210 mm / 8.3 x 8.3 inches
- No PC required

**i103 L-G integration drawings  
Marking head**




**Marking window**

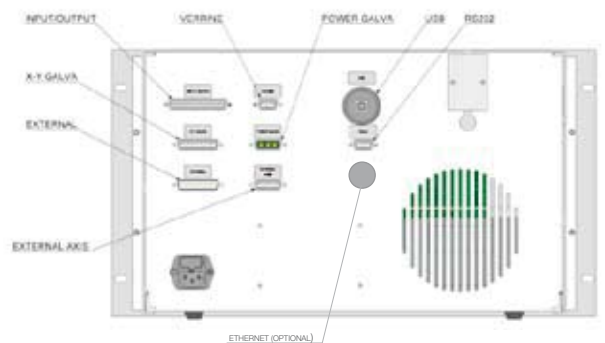
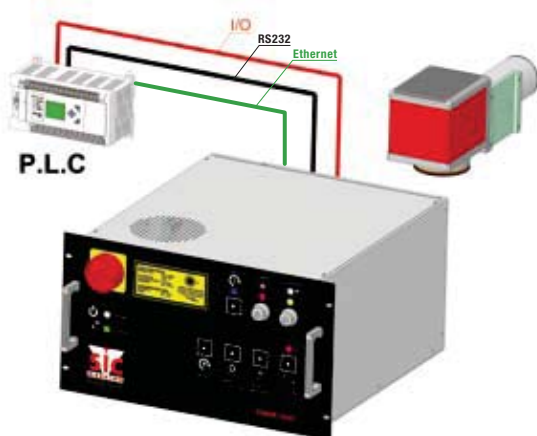


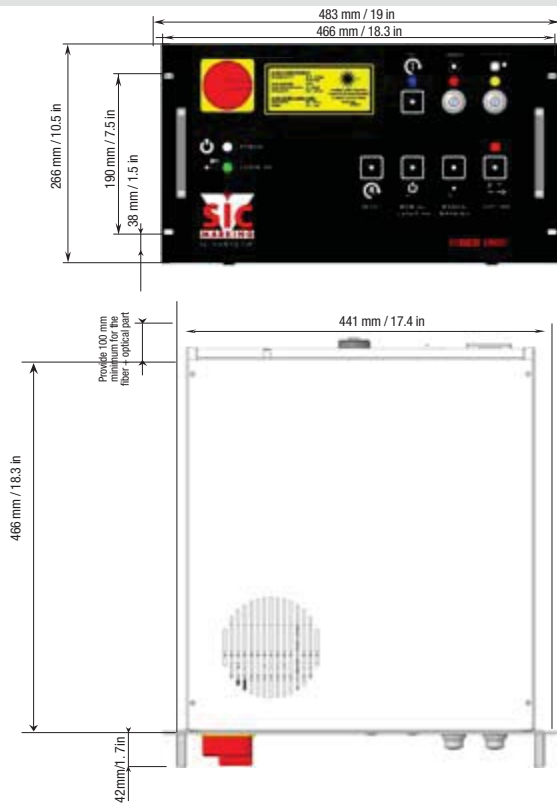
**Pyramid of marking fields**

**TECHNICAL FEATURES**

**i103 L-G**

Marking field	100 x 100 mm / 3.9 x 3.9 inches (up to 210 x 210 mm / 8.3 x 8.3 inches in option)
Weight	Fiber Unit : 19 kg / 42 lbs - Head : 5kg / 11 lbs
Power	750 Watt
Security	Class 4 laser (EN60825-1 standard) to secure 
Control	SIC laser ADVANCED





## Characteristics


- Operation mode: Pulsed (20 to 500 KHz)
- Wavelength: 1 064 nm
- Average power: 10 W, 20 W or 50 W
- Peak power: 10 kW
- Laser tuning: Edge viewing of marking
- Cooling: By air only
- Warranty: 24 months (except for optics). Warranty extension up to 5 years available.

## ADVANTAGES OF FIBER UNIT

### Reliability and performances

- Doped Ytterbium fiber laser source, diode pumped
- 3 axis control

### Security

- Integrated safety loop, for class 1 integration 

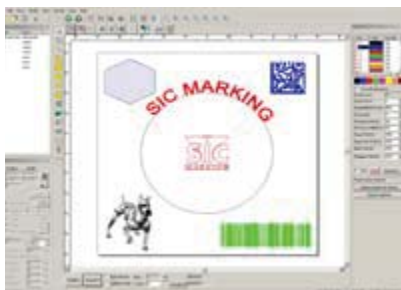
### Communication

- RS 232 / Ethernet interface: INIT function, file selection, variable assignment, Start/Stop function
- Input / Output cycle management
- Test COMMUNICATION software

## FILE CREATION MODE / SOFT TECHNICAL FEATURES

### CONTROL WITH SIC LASER ADVANCED SOFTWARE

<b>Functions</b>	Creation and editing of marking files (drawing, text, bar code, Datamatrix, ...)
<b>Laser tuning</b>	Several pen settings (speed, power, frequency, ...)
<b>Fonts</b>	TrueType, 1D bar code and 2D code (Datamatrix)
<b>Import fonction</b>	Pictures (.bmp, .jpg), and vector files (.plt, .dxf, .ai)
<b>Data Base</b>	Link with external files (.txt, .xls)
<b>Cylindrical parts</b>	Rotary axis (optional)
<b>In/Out</b>	Integrated



### ■ File creation on PC

Entity or marking field creation : characters, logos, shapes, 1D or 2D coding  
 Font selection  
 Hatch configuration  
 Pen settings



### ■ File transfer from PC to Fiber Unit



### ■ Marking in stand-alone mode (no PC required)



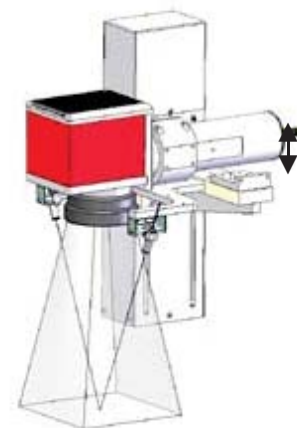
## MACHINES



Integrated vision system (mark verification)



Fume extraction system



Motorized Z axis option



Bar-code and DataMatrix reader

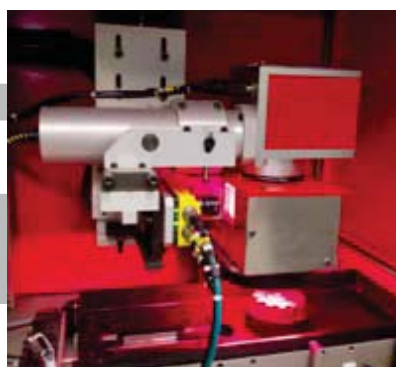


Training / Certified training center

## APPLICATIONS



Four marks simultaneously on connecting rod by 4 galvano-heads



Drawer for part loading and reading camera



Laser tunnel protection

## MARKING SAMPLES



Mark today  
Identify tomorrow



## SIC Marking® ACTIVITIES

PERMANENT  
MARKING



CONVENTIONAL  
MARKING



DOT PEEN



SCRIBING



LASER

INDUSTRIAL  
VISION



INDUSTRIAL  
VISION

TURNKEY  
SOLUTIONS



TURNKEY  
SOLUTIONS

### SIC MARKING, THE MARKING SOLUTIONS LEADER

SIC Marking is an international company dedicated to the development of permanent marking solutions & automated identification for complete traceability of industrial components.

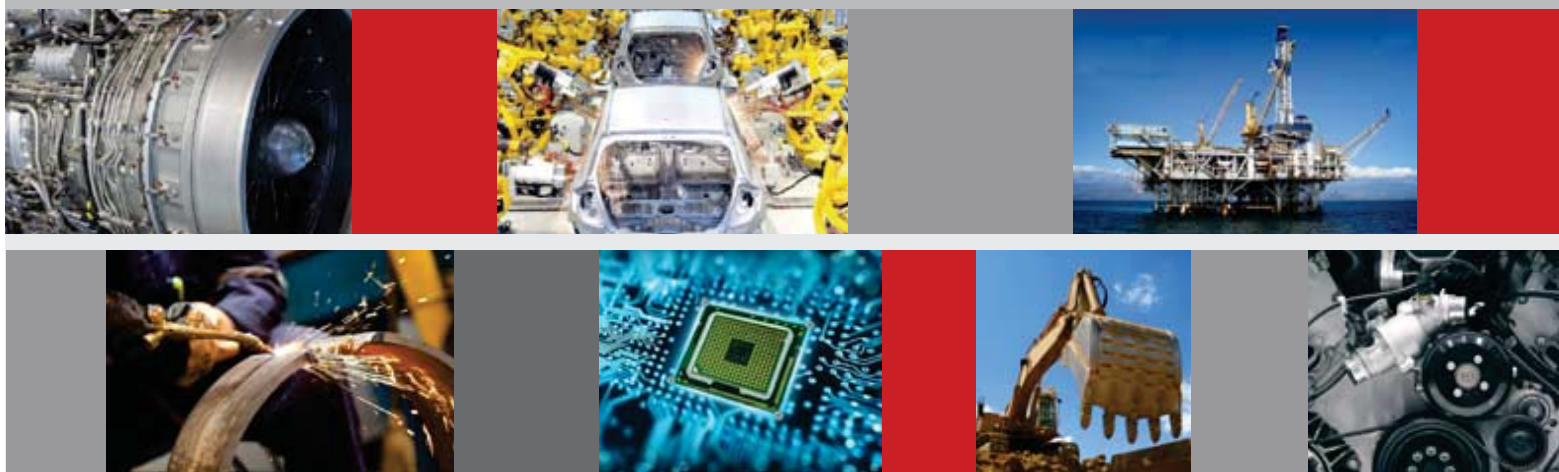
SIC Marking has developed a full range of exclusive marking machines - dot-peen, scribing & laser technologies - and services.

### SIC MARKING, A WORLDWIDE NETWORK 40 DISTRIBUTORS AND 5 SUBSIDIARIES

#### SIC Marking

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