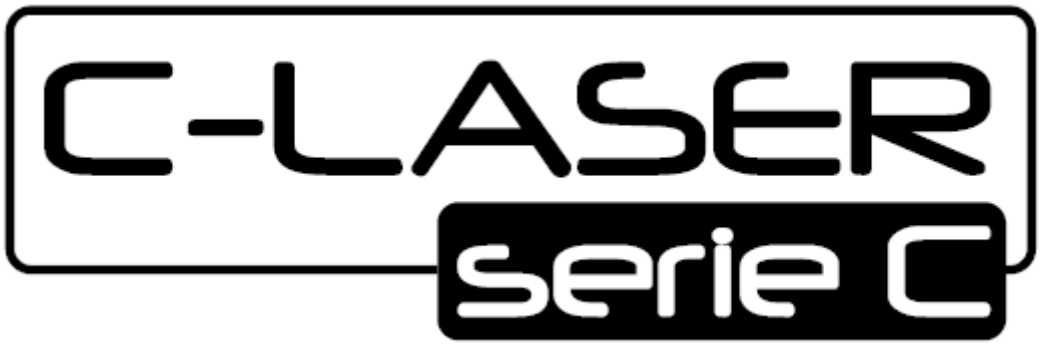


LASER MARKING SOLUTIONS

10 ; 30 ; 60 ; 80 ; 100 ; 150 ; 200 ; 300 Watt

LASER C02

High flexibility for many applications

CICRESPI laser marking systems ensure high reliability and quality, with an excellent cost/performances ratio. They allow to mark almost any material, and keep a wide range of applicatory solutions accessible.

The advantages of the laser marking systems are high speed, uniform printing quality, the possibility to print on areas of minimum or big dimensions and their compatibility with almost all the environments.

CO2 Technology allows to mark in an indelible way, with an excellent clearness and readability, guaranteeing a clean working environment.

Marking with laser technology

No fluids or other consumables needed

Laser marking system is very different from all the other methods. When a laser is used, no fluid is needed to create writing or images.

Laser printers for matrix or vectorial printing are available.

Marking through heat

The electrical stimulation, through a radiofrequency signal, of carbon bioxide (Co2) contained in the laser tube generates a laser beam.

When concentrated on an appropriate material, the laser beam is absorbed and heat is generated. Through a series of mechanisms, heat is converted in a sign on the product:

- Colour alteration caused by a chemical reaction;
- Engraving of the surface, for ex.: corrosion of PET through burning;
- Ablation or removal of the coating of the surface.

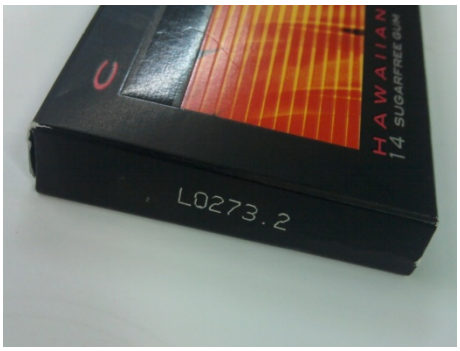
Matrix or vectorial printing

Some characters or graphic elements are produced through controlled activation and deactivation of laser beam, at the same time as it runs through the printing area.

While in the matrix printing the number of printable characters and their readability is limited by the resolution of the matrix, with the vectorial printing the range of the available characters is considerably wider.

Vectorial lasers are almost replacing on the market the matrix printers, this is why CICRESPI propose only lasers of this kind.

- Low cost marking systems;
- High speed printing;
- Compatibility with a wide range of materials;
- Marking in very reduced dimensions;
- Extreme reliability even in the difficult conditions of the industrial environments;
- Environmentally friendly.

PET	PAPER / CARDBOARD
	
CAPSULES / LIDS	PAPER LABELS
	
GLASS	COATED FILM
	
TETRA PAK	WOOD
	

MARKING FORMATS

Standard fonts: simplified chinese, eastern/western european
Codes readable by vision systems: ID matrix, barcodes
Logos/symbols (bitmap or vectorial)
Graphic elements (ellipse, rectangle, polyline)
Variables (serial numbers, text, date, time, batch code)

Marking speed (according to application)

Up to 500 characters/sec.

Line speed (according to application)

Up to 2 m/sec.

COMPONENTS OF THE LASER MARKING SYSTEM

Standard configuration

Laser marking unit (includes laser, high speed galvanometric digital scanners, lens, controller, I/O panel, feeder, connectors, lamps, switches, 90° head; photocell)

Options and accessories

Mobile support; laser protection screen; fumes aspirator; encoder; optical fibres photocell; support for touch screen; mounting clamps

Laser tube

Single sealed CO2 laser, power class 10 / 30 / 60 / 80 / 100 / 150 / 200 / 300 Watt
Wave length of the central emissions: 9,3 / 10,6 µm

USER INTERFACES

Touch screen tablet

PC-based; communication with the marking unit via Ethernet or USB
IP20
Configurable in English (USA, UK), Chinese (simplified, traditional), Korean, Thai, Vietnamese, Spanish, Portuguese, Brazilian Portuguese, Arabic, Danish, Dutch, German, French, Italian, Polish, Russian, Turkish

Built-in keyboard

On and off buttons; LED indicators for state, laser emission and error

SOFTWARE

Control unit software

User interface performs Windows® per the setting of the marking processes and lines configuration, of printing and system parameters
Creation and modification/editing of the processes; vertical/horizontal setting, rotation and adjustment of marking contents and intensity variations
WYSIWYG
Different protection levels with password

Communication

Input for encoder and product detector
Digital I/O for start, stop, block, shutter block, ready, error, shutter closed

POWER

From 100 a 240 V 350 VA, 1 PH, 50/60 Hz

Environment protection

Protection against dust; internal air cooling
Working temperatures: from 5° to 40° C (from 41° to 104° F); up to 45° C (113° F) with reduced working cycle
Humidity range: from 10 to 90% without condensation

Security regulations and sealing

IP20; product LASER CLASS 4 (ACC. DIN EN 60825-1)

Approximate weight

Marking unit: 14 Kg

MECHANICAL SIZES