D - SERIES
COMPACT DIODE PUMPED LASER SYSTEM FOR
HIGH QUALITY MARKING
OF A RANGE OF METAL
AND PLASTIC SUBSTRATES

D-5000 by MACSA
Reliable. Smart. Easy.
A CODE YOU CAN TRUST

- ITS COMPACT DESIGN with adjustable marking head enables this laser to be installed on even the most complex production lines or in tight spaces where other lasers just won’t fit.

- DYNAMIC “ON THE FLY” YAG marking is a reality with this system thanks to MACSA’s sophisticated software and many years’ experience of high speed applications.

- LOW COST OPERATION thanks to an innovative diode pumped YAG laser tube which requires no maintenance and no consumables.

- SUPERIOR QUALITY MARKING provides you with sharper bar codes and more precise logos and technical drawings.

- OPERATOR FRIENDLY using different user interfaces with special softwares to design and control all your marking requirements.

- RELIABLE & CLEAN laser technology results in less maintenance and less worries about “downtime”.

- A WIDE RANGE OF MATERIALS including even highly reflective metal surfaces as well as plastics provide excellent results.
USER INTERFACE
FOR LASER SYSTEMS

HAND-HELD TERMINAL [1]
Connection via RS-232 with ScanLINUX software included in laser marking system • creation and editing of text messages • able to create up to 4 lines of text • 4 types of MFF fonts • modify message XY position • time marking in multiple formats • clock adjustment • sequential numbers • password protection system.

TOUCH SCREEN [2]
Connection via RS-232 with ScanLINUX software included on marking laser system • Handheld Terminal emulator • allows control of the laser marking system from a remote touch screen.

PERSONAL COMPUTER [3]
Connection via TCP/IP (Marca Lite™) or Ethernet TCP/IP (Marca™) • compatible with all kinds of operating systems Windows NT/Me/2000/XP/7/8 • able to control the laser marking system from a remote PC • confers powerful graphics capabilities • able to create messages in all of the marking area.

SOFTWARE
FOR LASER SYSTEMS

SCANLINUX™ V 3.3 INTERNAL SOFTWARE CONTROLLING THE LASER MARKING SYSTEM [4]
ScanLINUX is the internal software running on LINUX managing the laser marking system • ScanLINUX allows the operation of the Handheld, Touchscreen, Marca Lite™ and Marc™ software • ScanLINUX includes Crystal Font™ dot matrix fonts • ScanLINUX software provides the option of changing the menu language of the Handheld terminal. It also allows the user to see the number of marks made during a printing session without going out of the printing menu.

MARCA LITE™ V 5.3 SOFTWARE FOR NETWORKING, STATIC AND DYNAMIC APPLICATIONS VIA TCP/IP [5]
Easily installed • Software compatible with Windows NT/2000/ XP/7/8 for networking, static and dynamic supplied with protection key • basic graphic interface able to build in text and graphic in all the marking area • create logos • capable of downloading MFF fonts and DXF vector files • alarm control.

MARCA™ V 5.3 SOFTWARE FOR HIGH RESOLUTION & STATIC/DYNAMIC APPLICATIONS VIA ETHERNET TCP/IP [6]
Easily installed • Software compatible with Windows NT/2000/XP/7/8 for high resolution & Marca™ software supplied with protection key • controls laser systems via Ethernet static/dynamic applications TCP/IP • powerful WYSIWYG design editor in all the marking area • zoom • bar codes • 2D barcodes • MFF font editor • character filling • capable of downloading BMP, JPG, GIF, TIF, PCX and other graphic files • capable of downloading DXF vector files with multiple import options • ODBC (database) features • true type text fonts • messages activated by hourly, daily or monthly changes • networking capabilities of several systems via Ethernet TCP/IP • Unicode Enable. Allows UHS.
## SYSTEM TYPE

<table>
<thead>
<tr>
<th></th>
<th>D-5003 GREEN B1</th>
<th>D-5006 GREEN B1</th>
<th>D-5010 B1</th>
<th>D-5020 B1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POWER</strong></td>
<td>3W GREEN</td>
<td>6W GREEN</td>
<td>10W</td>
<td>20W</td>
</tr>
<tr>
<td><strong>WAVELENGTH</strong></td>
<td>532µm</td>
<td>1.064µm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAINS SUPPLY</strong></td>
<td>125V / 230V</td>
<td>125V / 230V</td>
<td>125V / 230V</td>
<td>125V / 230V</td>
</tr>
<tr>
<td></td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td></td>
<td>(1 Phase + N)</td>
<td>(1 Phase + N)</td>
<td>(1 Phase + N)</td>
<td>(1 Phase + N)</td>
</tr>
<tr>
<td><strong>Typ</strong></td>
<td>250VA</td>
<td>350VA</td>
<td>250VA</td>
<td>350VA</td>
</tr>
<tr>
<td><strong>Max</strong></td>
<td>300VA</td>
<td>400VA</td>
<td>300VA</td>
<td>400VA</td>
</tr>
</tbody>
</table>

## DIMENSIONS

<table>
<thead>
<tr>
<th>Head (A x B x C)</th>
<th>Rack (482x177x454 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>368x141x190 mm</td>
<td>728x141x190 mm</td>
</tr>
</tbody>
</table>

## WEIGHT

<table>
<thead>
<tr>
<th>N.W.</th>
<th>G.W.</th>
</tr>
</thead>
<tbody>
<tr>
<td>28kg</td>
<td>33kg</td>
</tr>
</tbody>
</table>

## SYSTEM

- Resonator of the laser source, DACs board, drivers of the scanners and galvanometric scanners built into the laser and marking head.
- Control and power electronics, CPU, power supplies and laser source pumping unit built into the control rack.

## OPTICS

<table>
<thead>
<tr>
<th>Working distance (mm)</th>
<th>Focal length (mm)</th>
<th>Marking area (mm x mm)</th>
<th>Beam diameter (µm)</th>
<th>Power density (kW/cm²)</th>
<th>Beam diameter (µm)</th>
<th>Power density (kW/cm²)</th>
<th>Beam diameter (µm)</th>
<th>Power density (kW/cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>90</td>
<td>58x58</td>
<td>18 - O</td>
<td>11.8 - O</td>
<td>24 - O</td>
<td>13.3 - O</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>85</td>
<td>95</td>
<td>60x60</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>138</td>
<td>148</td>
<td>77x77</td>
<td>30 - S</td>
<td>4.2 - S</td>
<td>40 - S</td>
<td>4.8 - S</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>190</td>
<td>200</td>
<td>100x100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;67 - S</td>
<td>2.8 - S</td>
<td>&lt;67 - S</td>
</tr>
<tr>
<td>230</td>
<td>240</td>
<td>150x150</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;101 - O</td>
<td>1.3 - O</td>
<td>&lt;101 - O</td>
</tr>
<tr>
<td>310</td>
<td>320</td>
<td>200x200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;126 - O</td>
<td>0.8 - O</td>
<td>&lt;126 - O</td>
</tr>
</tbody>
</table>

µm: microns  S: Standard  O: Optional

Standard configuration of Marking at 90º (easily convertible marking at 0º using an external elbow).

## SOFTWARE

- ScanLinux V5.1.7 and higher for D-5000 B1 laser systems.
- Software Marca V5.6.9.a and higher for D-5000 B1 laser systems.
- Internal bar code.

## USER INTERFACE

- Hand held terminal.
- Touch screen.
- PC.

## CONTROL

- Hand held terminal with ScanLinux software.
- Touch screen with ScanLinux software.
- Full graphics interface: it includes Marca™ software, Hasp key and Ethernet cable (TCP/IP).
- Software Marca Lite: it includes Marca™ software, Hasp key and Ethernet cable (TCP/IP).

## LASER SOURCE

- End pumped Nd:YAG resonator by an optical fibre.
- Beam pointer (optional red diode).

## ACCESSORIES / OPTIONS


## ENVIRONMENT CONDITIONS

- +15º C (59º F) to 40º C (104º F) external temperature.
- Humidity <95% non-condensing.
- No vibrations.