Three times the first choice

Marking and engraving with flexible and computer-aided control

www.or-laser.com
Maximum quality in focus

Anyone who demands efficiency and flexibility in marking and engraving can no longer afford to ignore laser technology. Whether your application involves metal, plastic, ceramics or wood, all of these materials can be successfully laser marked, with little or no limitation to the shape or content of the marking.

MAG LASER points the way

The new MAG LASER is a ready-to-use complete solution with a broad range of applications: From marking, annealing, engraving, ablation to branding, it offers the right solution for every process. The laser beam will never exhibit wear, meaning consistency and high quality is guaranteed. The flexible, computer-aided control allows for full separation and clarity of each marking, while encompassing the marking of moving articles, such as conveyor belts, with ease and precision.

Highlights

- Pulsed fiber laser with the best beam quality ($M^2 < 1.3$)
- Option of short pulses available for best results
- With the engraver laser every kind of objects can be visualized, such as drawings, graphics, logos, bar and QR codes.
- Select the suitable laser/scan parameters for every engraving application
- Rotational tool for engraving on cylindrical surfaces
- Selection of the F-Theta lens for different engraving field sizes
- Every steel product and non-ferrous metal can be engraved. Glass and ceramic is suitable as well if a layer of laser marking spray has been applied on the surface previously
- A pilot laser visualizes the outline of the reachable area in order to position the piece precisely
- High quality engraving: highly durable, weather proof and environment-friendly
- Drilling: with minimum diameter of 100 µm.
- Easy to integrate into any production lines.
- Touchless and easy work
The model range

All three models (Pro, Box, Big Box) can be combined with the full range of power classes. You can select between 10, 20, 30 or 50 watts depending on the material. For example, if you only process plastic 10 W is completely sufficient. If you use the 20 W laser, you can also process ceramics and metals. 30 W and 50 W will cover the entire spectrum: Marking and engraving of almost all materials is guaranteed at even higher speed. To put it briefly: Just make a combination to suit your individual requirements.

MAG LASER – models

Flexible integrable

The PRO model is of interest to companies who already have a laser system such as the OR Laser HTS MOBILE. The PRO laser unit can be integrated very easy, for example, in production facilities for series production. By its flexibility the PRO laser unit is suitable for any size of components. As an option, „marking on the fly“ is available, which is ideal for the labelling of movable components.
Clean and safe

The BOX model is aimed at users who often process small components of up to 10 kg. The automatic lettering field of 115 x 115 mm is ideally sized, whether for single parts or small series. The processing table, sized at 250 x 210 mm is moved by a motor in the z-axis, with a travel path of 120 mm.

A device for an extraction unit is also fitted. This guarantees a clean and environmentally-acceptable working. Thanks to its enclosed housing of Laser Class 1 according to DIN 60825-1, the BOX laser unit can be used in all rooms without further safety precautions.

All materials

Almost all materials, from brass to aluminium up to plastics, can be processed. Even mirrored surfaces are no problem.
For heavy workpieces

The BIG BOX model is constructed for medium and heavy workpieces of up to 115 kg, and profits from its high flexibility. In its standard version, the laser system is fitted with a motorised z-axis for traversing the laser unit. A further z-axis with an x-y table is available for increased processing space, and this can be comfortably operated with a joystick.

The automatic marking field is 115 x 115 mm in size, but it can be extended with another optional f-theta lens.

A powerful extraction unit is already integrated. If the components are heavy, the fact that the housing cover can simply be lifted upwards is of considerable benefit. This means that the component can be fixed to the table, for example using a lifting device.

Like of the BOX model, the BIG BOX complies with Laser Class 1 to DIN EN 60825-1 with the housing closed. This model can also be used in all rooms without further safety measures.

Dimension: L 1450 mm x H 1980 mm x W 1000 mm
Weight: > 450 Kg
Software

All models include a notebook with a 2D software as standard. It is suited optimally for surface processing. For example, it permits: The importing of AI, DXF, HPGL, BMP, JPG files as well as others.

Reworking of CAD files, up to 255 different parameters per file, list input for the marking sequence, external trigger control, direct text input, barcode, data matrix code, time and date, linear, radial and polylinear text. Marking of rotating parts on the rotation axis.

Creation of 2D markings with the supplied software “ScanMasterDesigner”

further application examples

Steel
Stainless steel stamp (stamp height 1.2 mm)
Neoprene
Rubber string
Ceramics
Plastic film
Technical data

<table>
<thead>
<tr>
<th>Laser</th>
<th>MAG-10</th>
<th>MAG-20</th>
<th>SP*</th>
<th>MAG-30</th>
<th>SP*</th>
<th>MAG-50</th>
<th>SP*</th>
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<tbody>
<tr>
<td>Laser type</td>
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<td>Fiber laser</td>
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<tr>
<td>Mean Power</td>
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<td>30 W</td>
<td>50 W</td>
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<td>1067 nm</td>
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<tr>
<td>Beam quality</td>
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<td>M²&lt;1.3</td>
<td>M²&lt;1.3</td>
<td>M²&lt;1.3</td>
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<tr>
<td>Stability (over 5 hours)</td>
<td>&lt; 2%</td>
<td>&lt; 2%</td>
<td>&lt; 2%</td>
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<tr>
<td>Modulation</td>
<td>20-100 kHz</td>
<td>20-100 kHz</td>
<td>35-500 kHz</td>
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<tr>
<td>Pulse width</td>
<td>100 ns</td>
<td>100 ns</td>
<td>1–300 ns</td>
<td>100 ns</td>
<td>1–300 ns</td>
<td>100 ns</td>
<td>35–300 ns</td>
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<tr>
<td>Max. power</td>
<td>5 kW</td>
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<td>428 x 106 x 140 mm</td>
<td>428 x 106 x 140 mm</td>
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<td>14.7 Kg</td>
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</tbody>
</table>

SP*: short pulses for best results

We offer a total of 7 F-theta lenses. Ask for advice about the right one for you.
Your Engineering Quality is always on our focus

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