

## Three times the first choice

Marking and engraving with  
flexible and computer-aided control



## 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.

## Highlights

- Pulsed fiber laser with the best beam quality ( $M^2 < 1.3$ )
- Option of short puls 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  $\mu\text{m}$ .
- Easy to integrate into any production lines.
- Touchless and easy work

## MAG LASER points the way

The new MAG LASER is a ready-to-use complete solution with a broad range of applications: From forming, marking, tempering and engraving as well as the removal of 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 character, while encompassing the marking of moving articles, such as conveyor belts, with ease and precision.



## The model range

All three models (Basis, 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: Labeling 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

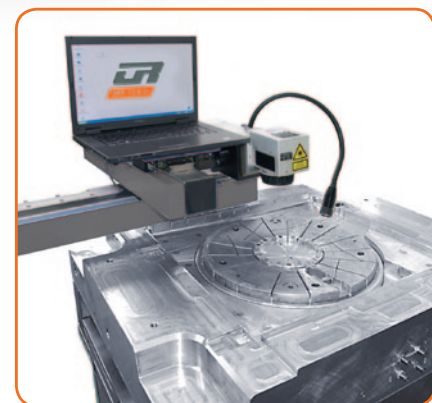


*Dimension: L 360 mm x H 116 mm x W 94 mm  
Weight: Laserhead 5 Kg / supply unit 14,7 Kg*

## Flexible integrable

The BASIS model is of interest to companies who already have a laser system such as the OR Laser HTS MOBILE. The BASE laser unit can be integrated very easy, for example, in production facilities for series production.

By its flexibility the BASE 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.



*Example of use:  
MAG LASER fitted to HTS MOBILE*



## 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.

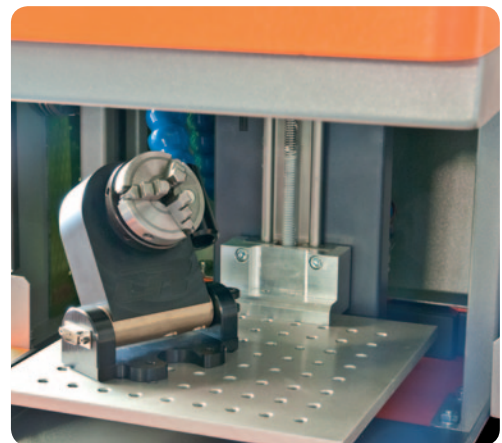
This guarantees a clean and environmentally-acceptable working.

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.



**BOX**

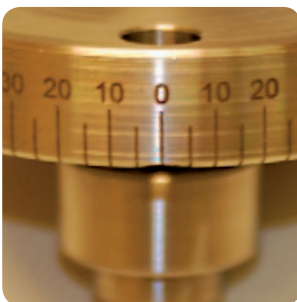
Dimension: L 700 mm x H 515 mm x W 420 mm  
Weight: 25 Kg



MAG LASER open with Rotating device

## All materials

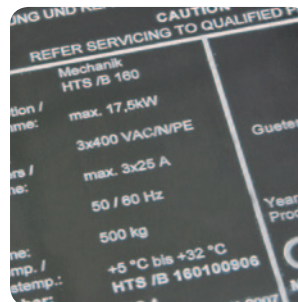
Almost all materials, from brass to aluminium up to plastics, can be processed. Even mirrored surfaces are no problem.



Brass



Plastics



Reflecting areas



Anodized Aluminium

## 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.

### BIG BOX



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



### BIG BOX-TT ROTARY TABLE

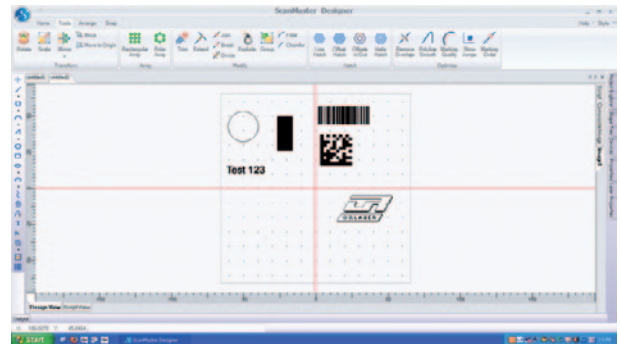


## Software

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.

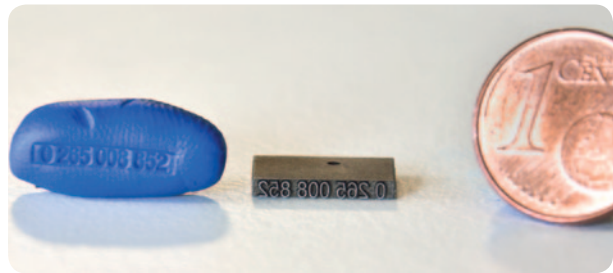


Creation of 2D markings with the supplied software "ScanMasterDesigner"

## further application examples



Steel



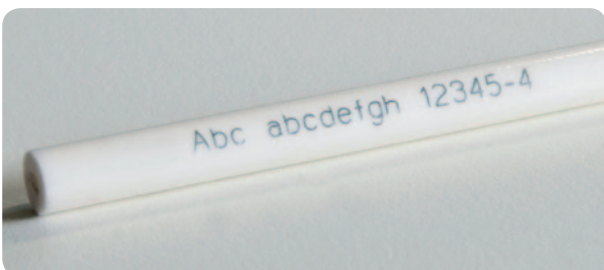
Stainless steel stamp (stamp height 1.2 mm)



Neoprene



Rubber string



Ceramics

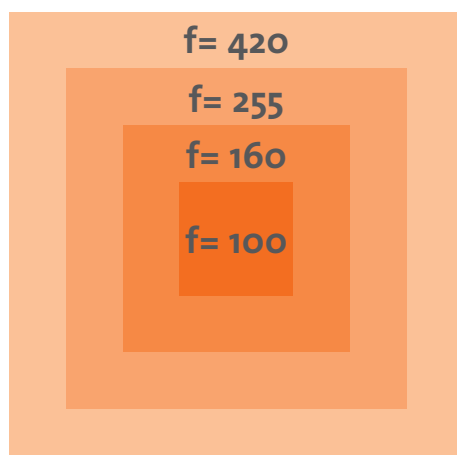


Plastic film

## Technical data

SP\*: short puls for best results

Laser	MAG-10	MAG-20	SP*	MAG-30	SP*	MAG-50	SP*
Laser type	Fiber laser	Fiber laser		Fiber laser		Fiber laser	
Mean Power	10 W	20 W		30 W		50 W	
Wavelength	1067 nm	1067 nm		1067 nm		1067 nm	
Beam quality	$M^2 < 1.3$	$M^2 < 1.3$		$M^2 < 1.3$		$M^2 < 1.3$	
Stability (over 5 hours)	< 2%	< 2%		< 2%		< 2%	
Modulation	20-100 kHz	20-100 kHz	35-500 kHz	20-100 kHz	35-500 kHz	30-200 kHz	35-500 kHz
Pulse width	100 ns	100 ns	1-300 ns	100 ns	1-300 ns	100 ns	35-300 ns
Max. power	5 kW	10 kW	20 kW	15 kW	40 kW	15 kW	40 kW
Pulse energy	500 µJ	1000 µJ	600 µJ	1500 µJ	850 µJ	1500 µJ	1500 µJ
Scanner							
Lettering speed	10.000 mm/s 550-1000 characters/s						
Positioning speed	17.000 mm/s						
Min. resolution	0,012 mrad						
General							
Power connection	230 V						
Power rating	800 W						
Cooling	Air cooling						
Ambient temperature	5-40°C						
Maße und Gewicht							
Fiber length	300 cm						
Laser head (L x W x H)	428 x 106 x 140 mm	428 x 106 x 140 mm		428 x 106 x 140 mm		428 x 106 x 140 mm	
Power supply (L x W x H)	349 x 130 x 325 mm	349 x 130 x 325 mm		349 x 130 x 325 mm		349 x 130 x 325 mm	
Laser head weight	7 Kg	7 Kg		7 Kg		7 Kg	
Power supply weight	14,7 Kg	14,7 Kg		14,7 Kg		15,7 Kg	



	F-THETA WITH F' = 100 MM	F-THETA WITH F' = 160 MM	F-THETA WITH F' = 255 MM	F-THETA WITH F' = 420 MM
Spot diameter	29 µm	45 µm	71 µm	117 µm
Lettering field	60 x 60 mm	110 x 110 mm	180 x 180 mm	300 x 300 mm

We offer a total of 7 F-theta lenses. Ask for advice about the right one for you.



# wORLD of LASER



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