



## DFL Brevis Marker 50 W

Ultrashort light pulses in the picosecond range afford astoundingly precise machining results in the micrometre range. These lasers permit high-precision machining with minimal damage to the workpiece material.

### Properties

The DFL Brevis Marker ultrashort pulsed laser boasts incredible pulse power and short pulse widths coupled with low heat input (known as "cold laser marking"). This means that they can be used to mark easily damaged, highly sensitive materials without altering the surface texture. Laser markings produced by the DFL Brevis Marker are characterised by their excellent precision, fantastic level of detail and superior surface quality. This laser is particularly well suited to the following applications:

- Burr-free engraving of stainless steel, hardened steel, aluminium and glass
- Black markings on raw aluminium, stainless steel and high-speed steel
- Colour changes on plastic
- Marking silicones
- Surface texturing
- Cutting thin materials

### Software



The laser system is controlled using our proprietary Magic Mark marking software. This software enables workpieces to be marked with text, graphics, codes (data matrix codes, barcodes), serial numbers and logos. It can also be used to achieve uniform markings around the perimeter of workpieces with rotational symmetry. An intelligent user privilege management system facilitates the creation of different user groups. This way, the laser system can be adjusted to cater for the user's specific requirements. When using the laser system in automated production lines, fully automated operation – including data exchange with various data sources – can be achieved without any difficulties. Optionally, plugins such as the code or script module can be used to add extra functions to the Magic Mark software.

Find out more about software add-ons

## Material

<b>Metal</b>	
Temper the metal	●
Engrave metal	●
Remove metal	●
<b>Plastic</b>	
Foam plastic	–
Carbonize plastic	–
Engrave plastic	–
<b>Laser foil</b>	
Foil removal	–
Foil color cover	–
<b>Glass</b>	
	●
<b>Ceramics</b>	
	●
<b>Wood, paper, leather</b>	
	–

– not suitable   ○ well suited   ● very suitable

## Compatible manual workstations

Workstation Professional  
 Robot-assisted laser station  
 Rotary indexing table  
 Workstation Professional XXL

## Compatible accessories

Fixed-mount reader  
 Tool reader  
 AOI  
 Software connections  
 Laser extraction systems  
 Laser safety  
 Magic Mark  
 AOI plugin  
 Contour Tool  
 Data Import plugin  
 GS1-Generator  
 OCR Plugin  
 Ruler Scale plugin  
 Z Segmentation plugin

Laser type	Fibre laser (ytterbium – picosecond fibre laser)
Mode of operation	Pulsed
Cooling system	Water-cooled
Wavelength	1030 nm
Laser power (max.)	50 W



Beam quality $M^2$	1.2 ≤ M2 ≤ 1.4		
Peak pulse power (max.)	10 MW		
Pulse energy	25 mJ		
Pulse width	1–3 ps		
Pulse repetition frequency	50–2000 kHz		
Delivery fibre	2 m		
Laser class	4, optionally 1		
F-theta lens (choose from options)	100	160	240
Size of marking area	60 x 60 mm	110 x 110 mm	180 x 180 mm
Power consumption (max.)	650 W		
Laser head weight	~8 kg		
Supply unit weight	~100 kg		
Laser head length (w x h x d)	149 x 107 x 596 mm		
Supply unit length (w x h x d)	598 x 691 x 947 mm		
Connection	100-240 V AC/12 A/50-60 Hz		
Interfaces	USB 2.0 Ethernet ports (2) RS-232/RS-485 serial ports (2)		
Laser-control interface for	Ready signal/malfunction signal, external shutter warning light, 8 digital inputs, 8 digital outputs, differential inputs for marking on the fly		
Interlock connection	Two-channel interlock, SD-ready		
Functional safety in accordance with DIN EN ISO 13849-1	PLe		
Marking software (included with the product)	Magic Mark V3		

