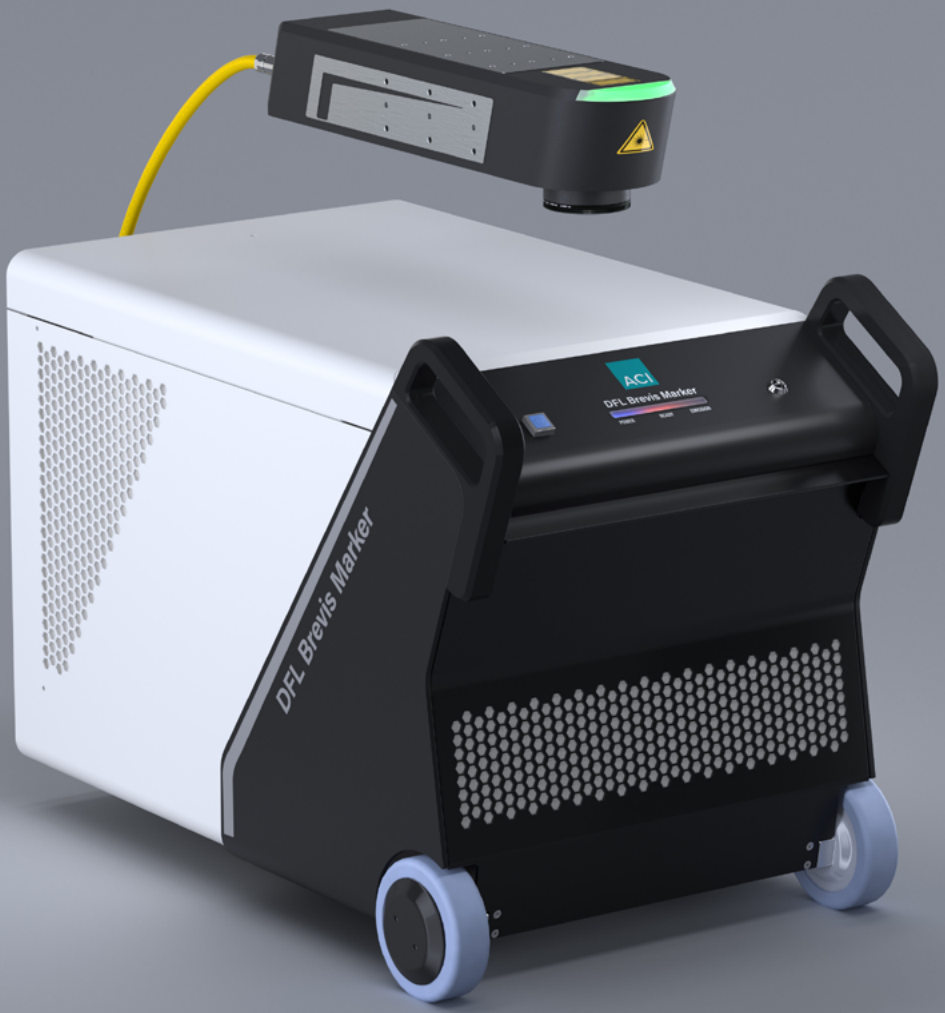
EN

Laser. Marking. Solutions.

ACI



DFL Brevis Marker

Built to last

Laser marking & laser micromachining with guaranteed quality

When marking a workpiece, the goal is to apply a **permanent**, **high-contrast**, **high-resolution** identifying mark to it. The **impact** on the material, along with any changes to its properties, needs to be **kept to a minimum**.
Business Fibre USP laser systems are the perfect solution for fulfilling these requirements.

The **DFL Brevis Marker** ultrashort pulsed laser guarantees the following advantages over comparable systems:

- Short pulses and **incredibly high peak pulse power** obtained by combining ultrashort pulsed laser (USP) technology with the benefits of a fibre laser
- **Wider range of applications** for high-contrast markings on plastics, burr-free, accurate, deep engravings on tools and jewellery, as well as transparent materials
- **Excellent engraving quality** coupled with excellent cut-edge quality and minimal heat transfer

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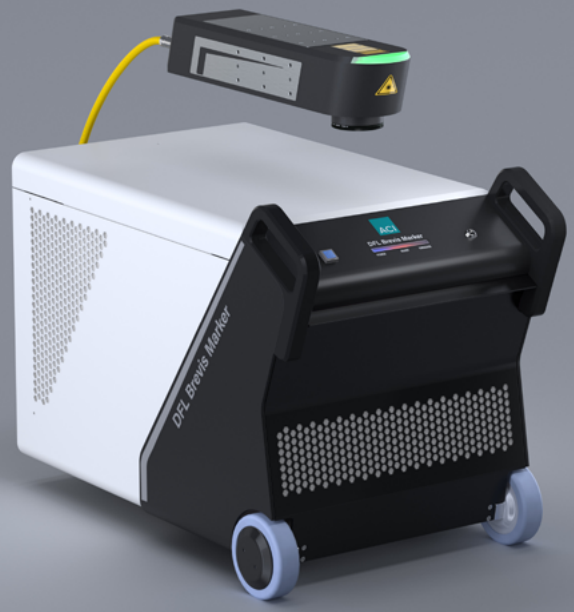
DFL Brevis Marker



DFL Brevis Marker

Ultrashort pulsed laser for maximum-precision laser-beam machining

The **DFL Brevis Marker** USP laser is a special solid-state laser that emits light pulses of the order of just a few picoseconds. It is designed for laser marking and laser micromachining.

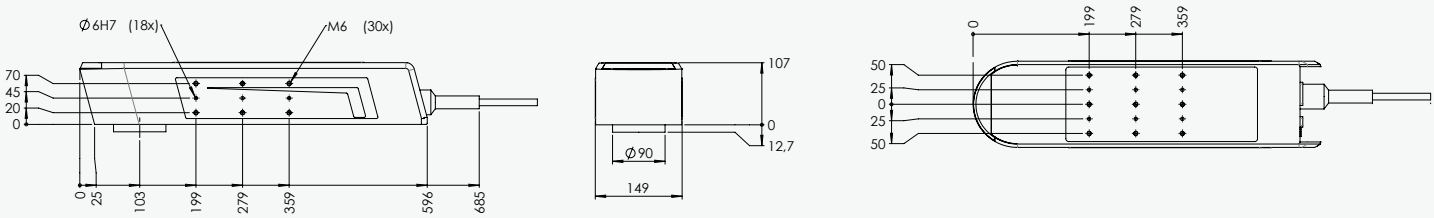
→ Features/properties → Optional features → Technical specifications → Applications

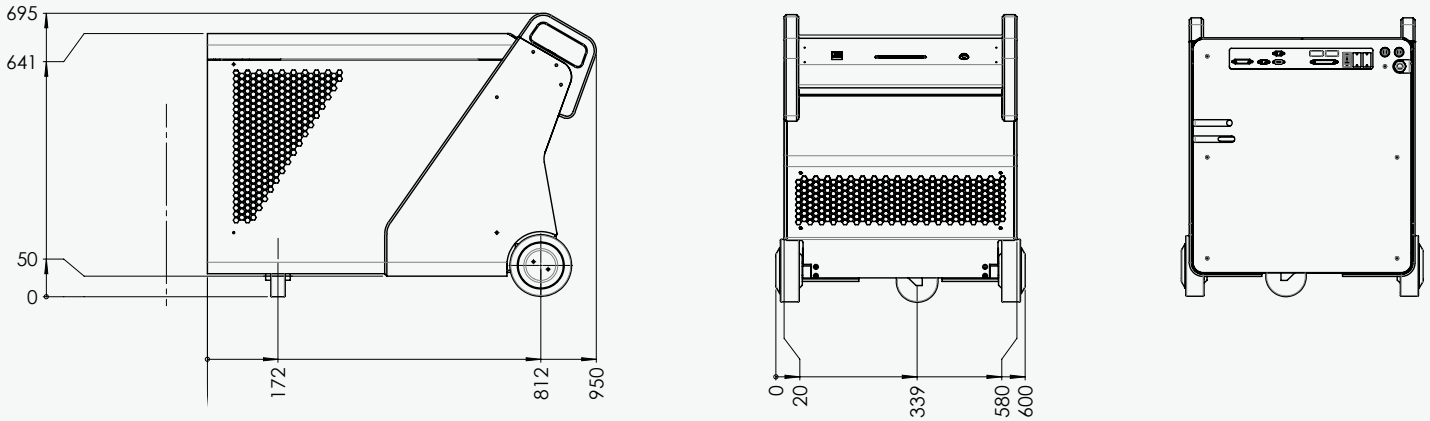
Features/properties

- Laser system consisting of laser head and supply unit
- Available as a standalone system or as a system that can be integrated into the customer's existing systems
- In the integration version, the individual components are supplied in 19" format ready for the customer to integrate into their systems
- Laser head is permanently fixed to laser beam source by means of fibre laser cable
- Easy to operate via Magic Mark V3 marking software
- Functional safety rating PLe acc. to EN ISO 138949-1

Optional features

- Imaging systems for automatic object identification (AOI), camera-assisted positioning of markings (CPM), and code readers
- Different lenses for different sizes of marking area, depending on the application requirements
- External focus finder
- Fully integrated control system, which means it supports various communication protocols, such as TCP/IP, Industrial Ethernet (Siemens S7 connection)





Technical specifications

DFL Brevis Marker

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	$1.2 \leq M^2 \leq 1.4$
Peak pulse power (max.)	12,5 MW
Pulse energy	25 µJ
Pulse width	Typically 2 ps (cannot be adjusted)
Pulse repetition frequency	50 - 2750 kHz
Delivery fibre	2 m
Laser class	4 (optionally 1)
F-theta lens (standard)	160
Size of marking area	70 × 70 mm
Power consumption	650 W
Laser head weight	Approx. 8 kg
Supply unit weight	Approx. 100 kg
Laser head dimensions (l×w×h)	149 × 107 × 596 mm
Supply unit dimensions (l×w×h)	598 × 691 × 947 mm
Connection	100 - 240 V AC/10 A/50 - 60 Hz
Interfaces PC interface Interlock connection Laser-control interface	 Internal control Two-circuit interlock, SD-ready Ready signal, malfunction signal/external shutter warning light, 8 digital inputs, 8 digital outputs
Internal laser control	2 × Ethernet/2 × RS232 / RS485/1 × USB 2.0/ differential inputs for marking on the fly

Applications

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 it can be used to machine easily damaged, highly sensitive materials without altering the surface texture. The machining results that can be obtained with this system are characterised by their **excellent precision**, **fantastic level of detail** and **superior surface quality**.

Drill bit (stainless steel)

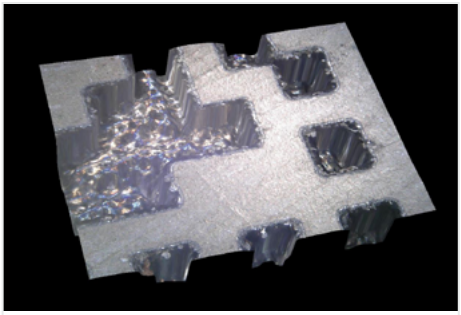
Ball bearing (stainless steel)

Black marking on scalpel handle (stainless steel)

Black marking (raw aluminium)

Black marking on rongeur (stainless steel)

Black marking on extruded profile (aluminium)



Engraving (hardened steel)

Marking on silicone hose

Deep engraving (brass)

Black marking on type plate
(non-anodised aluminium)

Black marking on haemostat
(stainless steel)

Gearwheel (steel)

Engraving (stainless steel)

Black marking on extruded profile
(aluminium)

Burr-free engraving
(aluminium)

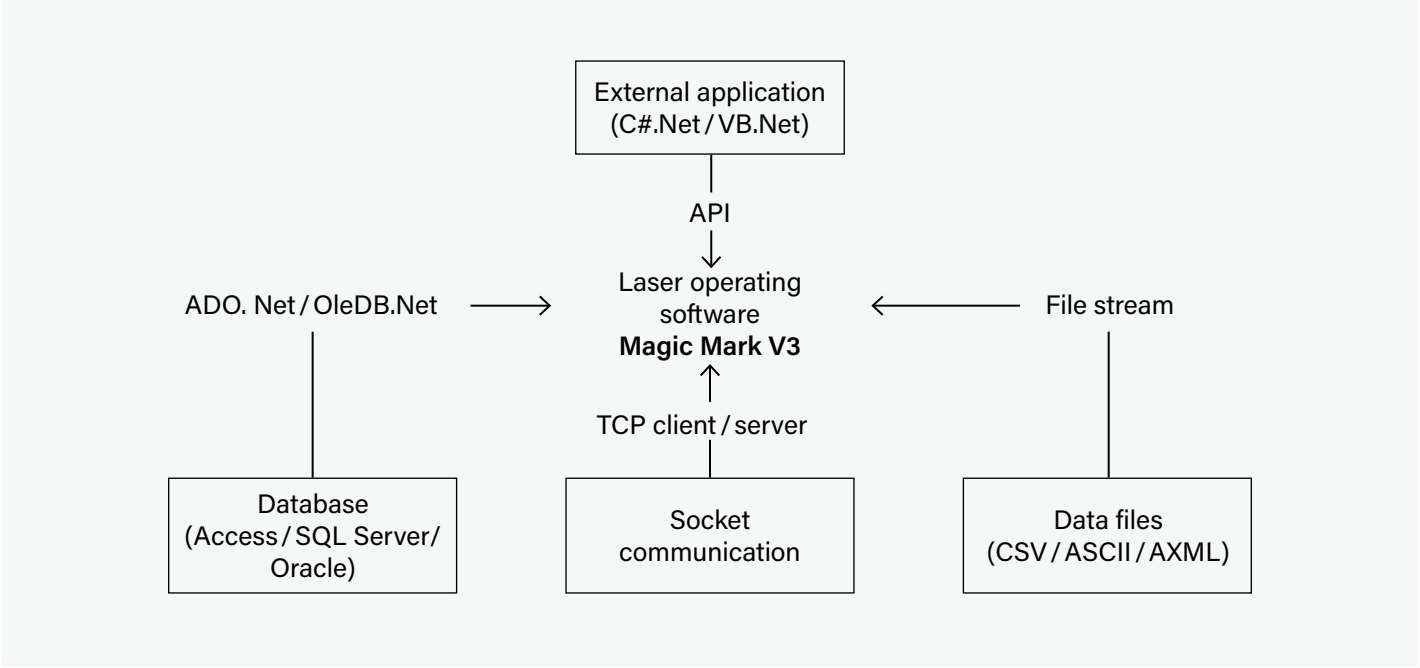
Black marking (raw aluminium)

Twist drill bit (HSS)

Indexable insert tool carrier (solid carbide)

Software-based control

The modern software architecture of the **Magic Mark V3** laser marking software enables targeted access to all available functions and allows users to control the laser and laser peripherals (work-station/axis of rotation, etc.).



Internal programming

VB.Net [Winwrap Basic]
integrated into Magic Mark V3

External programming

C#.Net [MS Visual Studio]
Access to class library

Benefits of **Magic Mark V3**

Software package
included with product

Predefinable
parameter sets

Plugins allow easy
addition of functions

Partnerships with ACI Laser
Benefits for customers

The search for excellent partnerships is at the heart of everything we do. We offer our customers sustainable solutions based on all-encompassing advice, reliability and stability.

ACI Laser embodies:

✓ Made in Germany development and production with over 20 years of experience

✓ Complete solutions from a single source: Laser systems, protective housings, software and accessories

✓ Customisable laser systems

✓ Functions can easily be added to the software using plugins

Made in Germany

Laser. Marking. Solutions.

We would be happy to advise you.

We guarantee you a tailor made, all-in-one solution that meets the requirements of your application. Our experienced sales team provides you with intensive consultation. We look forward to hearing from you.

www.aci-laser.de

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