



Economy Fibre

Built to last

Laser marking 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.

Economy Fibre laser systems are the perfect solution for fulfilling these requirements.

To ensure that they will always run smoothly, our products are subject to strict quality control at both the development and the production stage. This guarantees safe, reliable operation from machinery that will stand the test of time.

The functional, compact design of these laser systems is taking industrial laser marking to new places.

CONTENTS

- DFL Ventus Marker Eco Industrial Design | Page 3
- DFL Ventus Marker Eco Standard Design | Page 7
- Applications | Page 10
- Software-based control | Page 11
- Collaborating with ACI Laser | Page 12
- Contact details, legal information | Page 13

DFL Ventus Marker Eco Industrial Design



DFL Ventus Marker Eco Industrial Design

Laser marker for industrial applications

This compact laser system has been specially designed for use in production lines in industrial environments. Its housing is protected against the ingress of dust and water splashing against it, and the versatility of this housing means that it can be installed with ease wherever needed. The supply unit can be converted between a 19-inch built-in module and a tabletop device, depending on the field of application and the process environment. The tabletop configuration has side walls, the bottom of which are shaped as feet to support the device. These can be removed so that the supply unit can be used as a 19-inch built-in module. The laser system is available in a range of power classes to suit different applications.

→ Features/properties

→ Optional features

→ Technical specifications

Features / properties

- Functional safety rating PLe acc. to EN ISO 13849-1
- Protection class IP64 (for laser head)
- 100% air-cooled
- Ambient temperatures up to 35 °C (for laser head)
- Can be installed in four different positions
- 3 m fibre length
- Low power consumption
- Control via external PC
- Available as a 20, 30, 50 or 70 W system

Standard interfaces

- Wide input range of 80-264 V AC
- 4 digital inputs and outputs
- External safety circuit rated PLe

Safety first Operator safety

The laser safety device (SD) is the core safety module in our laser marking systems. It complies with the safety function requirements set out in DIN EN ISO 13849-1, performance level e.

Optional features

- Imaging systems for automatic object identification (AOI) and camera-assisted positioning of markings (CPM)
- Code readers
- Different lenses for different sizes of marking area
- External USB output e.g. for camera applications
- External focus finder

DFL Ventus Marker Eco Industrial Design

Economy Fibre

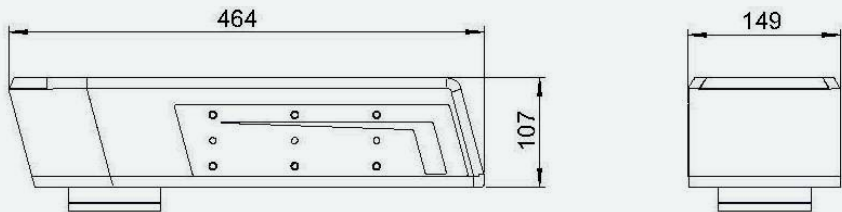
Laser head

Dimensions (l×w×h)

464 × 149 × 107 mm

Weight

7 kg



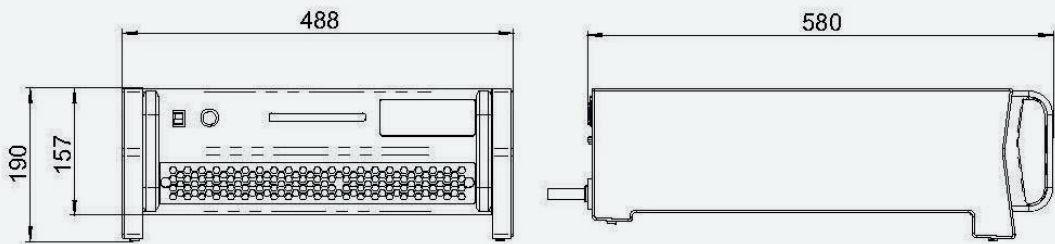
Supply unit in
tabletop configuration

Dimensions (l×w×h)

488 × 190 × 580 mm

Weight

25 kg



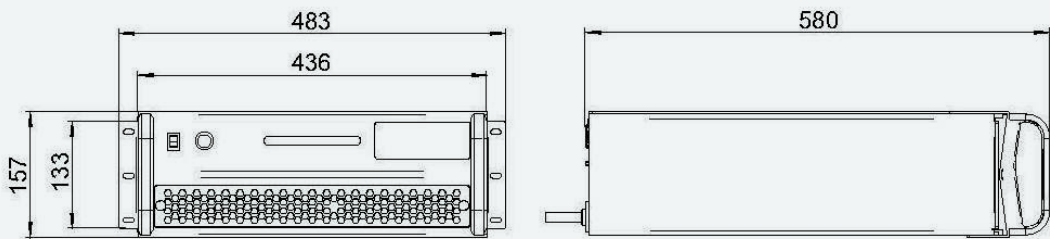
Supply unit as
19" built-in module

Dimensions (l×w×h)

483 × 157 × 580 mm

Weight

22 kg



Technical specifications

DFL Ventus Marker Eco Industrial Design Economy Fibre

Laser type	Diode-pumped fibre laser (Yb:fibre), Q-switched			
Beam quality (typ.) M ²	1.6			
Wavelength	1064 ± 4 nm			
Laser power	20 W	30 W	50 W	70 W
Peak pulse power (max.)	12.5 kW		14.5 kW	
Pulse energy (max.)	1 mJ		1.45 mJ	
Pulse widths (frequency-dependent)	80 – 120 ns		100 – 140 ns	
Pulse repetition rate	20 – 80 kHz	30 – 80 kHz	50 – 80 kHz	
Transport fibre	3 m			
Laser class	4 (optionally 1)			
Size of marking area	Choose from: 60 × 60 mm / 110 × 110 mm / 180 × 180 mm**			
Power consumption (max.)	250 W	300 W	400 W	600 W
Mains connection	85 – 264 V AC / 10 A / 50 – 60 Hz			
Head weight Supply unit weight	7 kg 25 kg			
Supply unit dimensions l × w × h	Tabletop system: 580 × 488 × 190 mm 19-inch system: 580 × 483 × 157 mm			
Laser head dimensions l × w × h	464 × 149 × 107 mm			
Software	Magic Mark V3			
Interfaces	2 serial ports (RS-232/RS-485)*, 2 Ethernet ports*, USB port, optional trimming module, interlock connection, laser-control interface with 4 digital inputs/outputs, power input module			
Functional safety acc. to DIN EN ISO 13849-1	PL _e			

* Depending on system used

** Larger sizes available on request

DFL Ventus Marker Eco

Standard Design



DFL Ventus Marker Eco

Laser marker for simple, high-output marking applications

The **DFL Ventus Marker Eco** from the Economy Fibre product series is an easy-to-use, powerful, class 4 fibre laser system. It specialises in simple, fast marking applications on metals and plastics, making it the ideal entry-level fibre laser marking system. Despite the simplicity of its design, the **DFL Ventus Marker Eco** is a reliable, durable system. The DFL Ventus Marker fulfils the requirements of the functional safety directives and standards as set out in DIN EN ISO 13849-1.

→ Features/properties

→ Optional features

→ Technical specifications

Features / properties

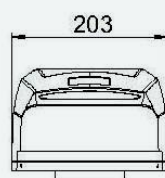
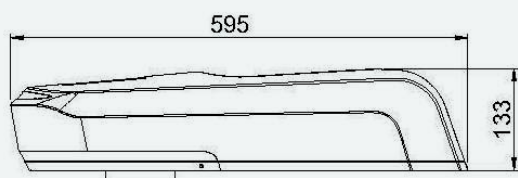
- PLe acc. to EN ISO 13849-1
- 100% air-cooled
- 3 m fibre length
- Low power consumption
- Available as a 20, 30, 50 or 70 W system
- Easy to integrate thanks to the compact and lightweight design

Optional features

- Imaging systems for automatic object identification (AOI) and camera-assisted positioning of markings (CPM)
- Code readers
- Different lenses for different sizes of marking area

Safety first Operator safety

The laser safety device (SD) is the core safety module in our laser marking systems. It complies with the safety function requirements set out in DIN EN ISO 13849-1, performance level e.



Laser head

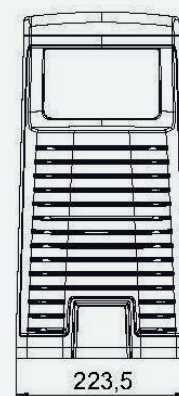
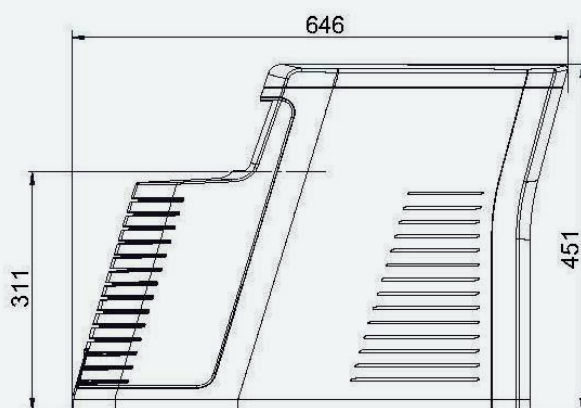
Dimensions (l x w x h)
595 × 203 × 133 mm

Weight
8 kg

Supply unit

Dimensions (l x w x h)
646 × 224 × 451 mm

Weight
20 kg



Technical specifications

DFL Ventus Marker Eco Economy Fibre

Laser type	Diode-pumped fibre laser (Yb:fibre), Q-switched			
Mode of operation	Pulsed			
Wavelength	1064 ± 4 nm			
Laser power	20 W	30 W	50 W	70 W
Beam quality (typ.) M ²	1.6			
Peak pulse power (max.)	12.5 kW		14.5 kW	
Pulse energy	1 mJ		1.45 mJ	
Pulse widths (frequency-dependent)	80 – 120 ns		100 – 140 ns	
Pulse repetition rate	20 – 80 kHz	30 – 80 kHz		50 – 80 kHz
Transport fibre	3 m			
Laser class	4			
F-theta lens (choose from options)	100 mm, 163 mm or 254 mm			
Size of marking area	60 × 60 mm, 110 × 110 mm or 180 × 180 mm			
Power consumption	250 W	300 W	400 W	600 W
Laser head weight	8 kg			
Supply unit weight	20 kg			
Laser head dimensions (l×w×h)	595 × 203 × 133 mm			
Supply unit dimensions (l×w×h)	646 × 224 × 451 mm			
Mains connection	85 – 264 V AC / 10 A / 50 – 60 Hz			
Software	Magic Mark V3			
Interfaces	2 serial ports (RS-232/RS-485)*, 2 Ethernet ports*, USB port, optional trimming module, interlock connection, laser-control interface with 4 digital inputs/outputs, power input module			
Functional safety acc. to DIN EN ISO 13849-1	PLe			

* Depending on system used

Applications

The **DFL Ventus Marker Eco** specialises in straightforward, fast marking applications on metals and plastics. Despite the simplicity of its design and operation, the **DFL Ventus Marker Eco** is a reliable, durable fibre laser system. It can achieve incredibly black marking results on stainless steel in particular.



Marking by annealing on
HSS countersink



Marking by annealing on
stainless steel sensor housing



Engraving on silver rings



Stainless steel flange



Laser marking on camera housing



Deep engraving on stainless steel



Ablation by selective layer removal on
anodised aluminium



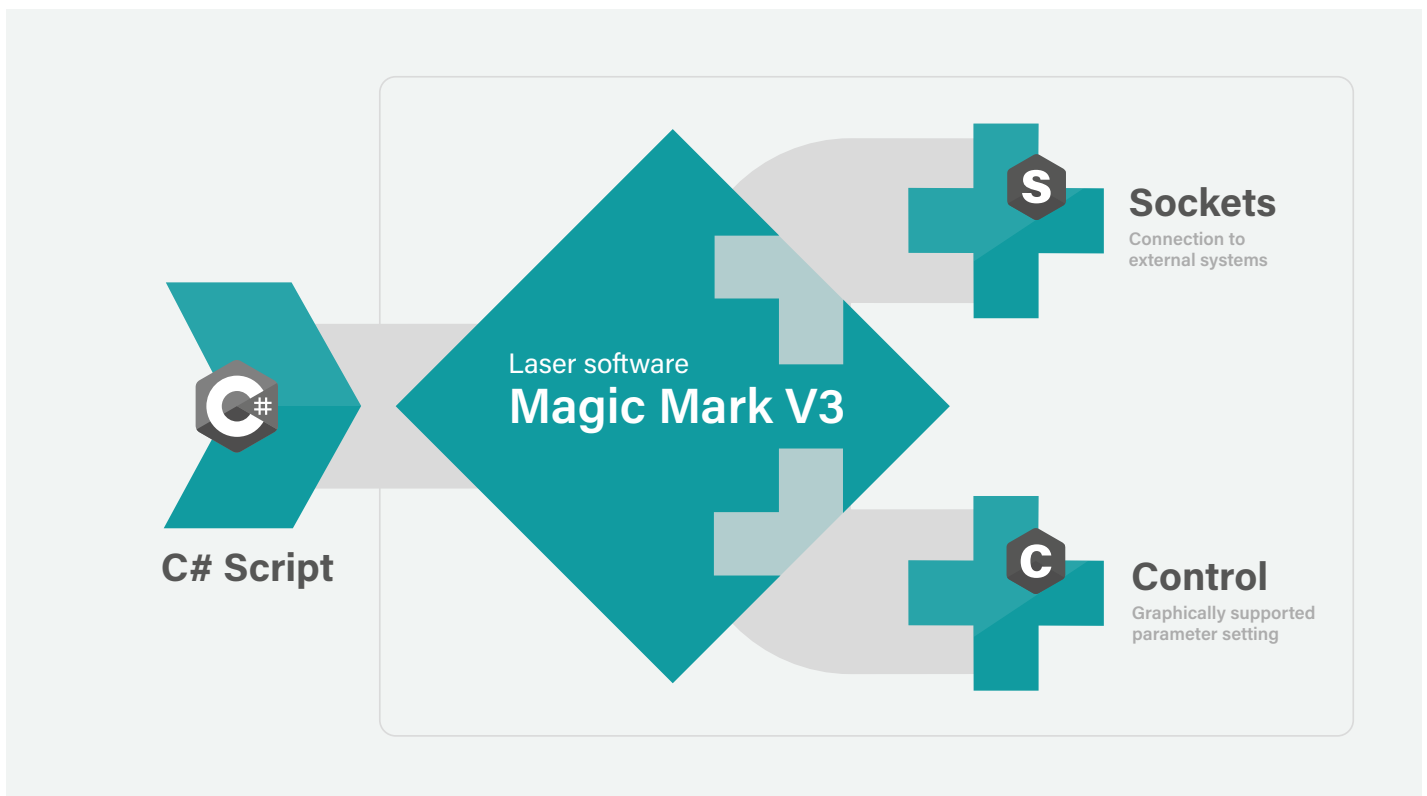
Laser marking on
anodised aluminium telescopic sight



Laser marking on
brass threaded fitting

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 (workstation/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 features





Collaborating with ACI Laser

Benefits for customers

We prioritise cultivating excellent working relationships with our customers so we can successfully serve their needs. We offer our customers sustainable solutions based on all-encompassing advice, reliability and stability.

ACI Laser is proud to offer:

- ✓ *German engineering* – development and production drawing on over 20 years' experience
- ✓ Complete solutions from a single source:
Laser systems, protective housings, software and accessories
- ✓ Customisable laser systems
- ✓ Plugins for easy addition of software features


Made in Germany



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 will provide you with comprehensive, in-depth advice. We look forward to hearing from you.

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