







-  Konventionelle Prägetechnik
-  Ritz-/Nadelprägetechnik
-  Typenradprägetechnik
-  Lasertechnik
-  Traceability
-  Sondermaschinenbau

# Modular Laser Marking System

## Technical data sheet

### Product description

This modular laser marking system is used for permanent marking of many different workpieces and materials. It provides high flexibility and adaptability thanks to the modular construction. The properties make the system ideal for different industrial applications, from marking components to metal signs and the processing of foils.

The modular concept facilitates simple integration of various devices in the work area of the protective enclosure. As a result, the laser marking system can be adapted quickly to different workpieces without the need for comprehensive retooling. The laser unit is adjustable and an adaptable extraction device makes for a clean working environment.



Application example: Entire foil laser system, 3D view



### Areas of application

**Materials:** • Metal, plastic, foil, glass, ceramics, steel, cast iron, ...

**Sectors:** • Automotive industry, electronics, medical technology, mechanical engineering, ...

#### Typical applications:







- Marking of components, signs (metal and foil), serial numbers, QR codes, barcodes, special characters

#### Processing type:

- Deep engraving, fine engraving, tempering, staining, foaming, stripping



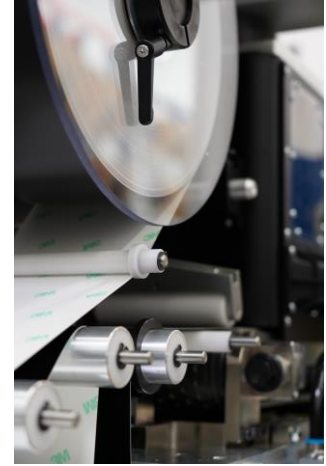
Solution example: Foil feed module in laser cabin

-  Konventionelle Prägetechnik
-  Ritz-/Nadelprägetechnik
-  Typenradprägetechnik
-  Lasertechnik
-  Traceability
-  Sondermaschinenbau

## Modular system

The laser marking system is characterised by the fully modular design which makes for simple adaptation to specific requirements:

- Interchangeable laser modules for different materials and processing speeds
- Adaptable laser unit which can be set flexibly to the workpiece size and shape
- Integrated devices, e.g. foil feed modules or plate feed modules, specifically for foil and metal signs, housing lettering modules, infeed axis
- Adaptable extraction device for safe removal of smoke and particles during the marking process









Application example: Foil feed module

The feeding of workpieces under the laser can be performed fully automatically thanks to different and easily interchangeable modules (red).

The laser unit (green) features an adjustable design and can be adapted to different modules for workpiece feeding.



Interchangeable modules for workpiece feeding

-  Konventionelle Prägetechnik
-  Ritz-/Nadelprägetechnik
-  Typenradprägetechnik
-  Lasertechnik
-  Traceability
-  Sondermaschinenbau

## Safety

The laser source of the system is of hazard class 4 but is designed with an all-round protective enclosure and integrated safety devices so that it meets the requirements for laser class 1. This ensures safe operation in the production environment.

The protective enclosure encloses the entire working area of the laser unit and ensures that no dangerous laser radiation exits the machine. Operation of the system in production environments is only completely safe thanks to this special enclosure and the use of safety switches and a safety control.



Marking example: Laser foil marked in the laser cabin

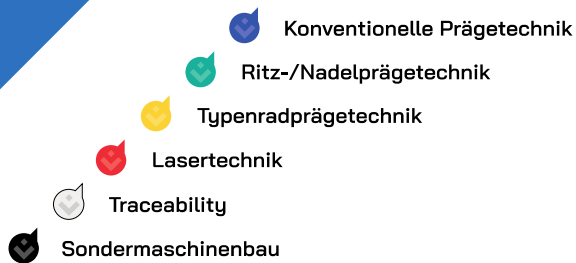
### Important safety features:

- **Protective housing:** The system only achieves laser class 1 if the enclosure is closed and the safety devices are activated. This means that no dangerous radiation escapes and operation is safe for the operator and the surrounding area.
- **Safety switch:** Prevents the laser from switching on when the protective enclosure is open.
- **Safety control:** Integrated safety controls continuously monitor the status of the machine and make sure it is shut off immediately in case of critical safety events.
- **Emergency off function:** Guarantees quick shut-down of the entire system in case of emergencies.

These safety devices make the laser marking system ideal for use in industrial series production, and guarantee protection for the operator in accordance with the strictest safety standards.



Application example: Laser cabin, front view with collection container and input PC



## Technical data

Parameter	Details
Laser class	Class 1 (with protective measures), laser source class 4
Wavelength	1064 nm (but customisable per application)
Power range	Adjustable to suit module and application
Cooling	Air cooling
Extraction device	Adaptable for different working materials
Energy supply	Modular, to suit power requirements
Work area	Adaptable to various workpieces and modules
Dimensions	Modular, to suit configuration

## Advantages of the modular laser marking system

- Flexibility: Fast switching between marking applications
- Adaptability: Easy to configure for various materials and workpieces
- Future-proof design: Upgrades and updates are straightforward thanks to interchangeable modules
- High safety: Maximum safety devices make the laser safe for series production
- Cost-effectiveness: Interchangeable modules reduce maintenance costs in the long term

## Contact

For further information and individual adaptations, please contact us:

BORRIES Markier-Systeme GmbH

Tel.: +49 7127 97 97 0

E-mail: [info@borries.com](mailto:info@borries.com)

Internet: [www.borries.com](http://www.borries.com)

