



**TFT**  
trusted future technologies



# Product Catalog

Laser Systems

# The Company



TFT is a leading manufacturer of industrial laser marking systems. German engineered and designed, TFT produces a wide range of desktop and custom industrial laser systems as well as delivering state of the art fully automated customized solutions for demanding mission critical manufacturing applications.

TFT, part of the RICHTER family of companies, was founded in 2007 and quickly made a name for itself with the design and development of advanced welding machines for the textile industry, utilizing ultrasonic, hot air and hot wedge technology. In 2010, our portfolio and technology expanded with the introduction of affordable laser marking systems. Laser marking offers durable, tamper-proof part identification on a wide range of different metallic and non-metallic materials - without the need for additional consumables like ink, pins, etc. Our laser markers come with high quality pulsed fiber lasers ranging from 10 – 50 Watts and deliver exceptional performance over a long-expected life with a minimum of maintenance. The precision optics used in our lasers deliver high resolution while allowing for a fast marking speed. In addition to our German engineered systems, we offer complimentary laser control software that allows for easy setup of layouts, including text, graphics, serialized fields and barcodes such as Data-Matrix, QR Code, and many other 1D barcodes.

Our motivated engineers and technicians are excited to help you find the most economical solution that meets all your requirements. TFT is your one-stop-shop for all your laser marking applications!

# Machine overview



## Laser marking system LSM 300

Compact table-top-laser cabin.  
Cost-effective start into laser marking.



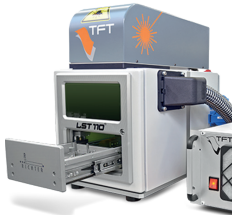
## Professional laser marking system LSM 700

Fiber-laser-marking system for versatile application.  
High life expectancy at maintenance-free operation. Fast laser marking of metal, plastic etc. at an attractive price-performance ratio.  
With the aid of integrated touchscreen PS's the handling is a child's play.



## Professional high volume laser marking system LSM 1500

Professional laser-marking system with spacious working area. Due to the existing X-Y-Z-axes and the preview function, the system is ideally suited for laser marking of loaded pallets as well as heavy and large workpieces.



## Type plate laser LST 110

Powerful fiber laser for marking of nameplates or small parts.  
Automatic type plate entry.  
Large marking area of 110 x 110 mm.  
Including control unit and pre-installed Windows software.



## Foil laser LSF 110

Fiber laser for marking and cutting-out of labels.  
Automatic foil transport.  
Including control unit and pre-installed Windows software.



## Integration laser LSI 200 / 300 / 500

Fiber laser for cost-effective realization of your own laser integration.  
With selectable marking area, power and various automation interfaces. Thanks to the compact design, the LSI can be integrated in almost every industrial production.

**Special solutions available on request.  
We will be happy to advice you!**

# Laser marking system LSM 300

The **LSM 300** table-top laser cabin is a compact and turnkey complete system of laser class 1.

This system shows a long life expectancy of the laser. It offers not only a large safety window with laser protection glass for process control but also an air cooling and the possibility to adjust a fume extraction unit. Due to lack of consumable supplies the marking laser LSM 300 allows a maintenance-free operation.

This is the optimum step into laser marking at a very good price/performance ratio.



## Applications

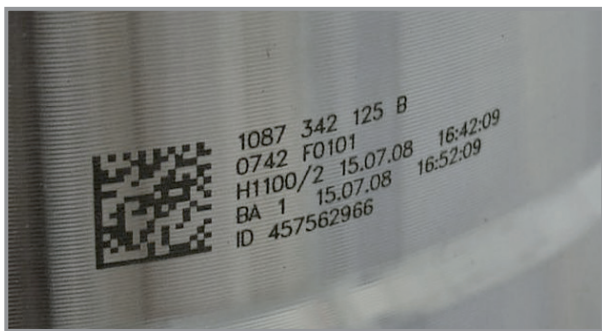
- Marking on metals, plastics, ceramics and more
- Laser engraving
- Laser cutting of thin materials

## Basic configuration

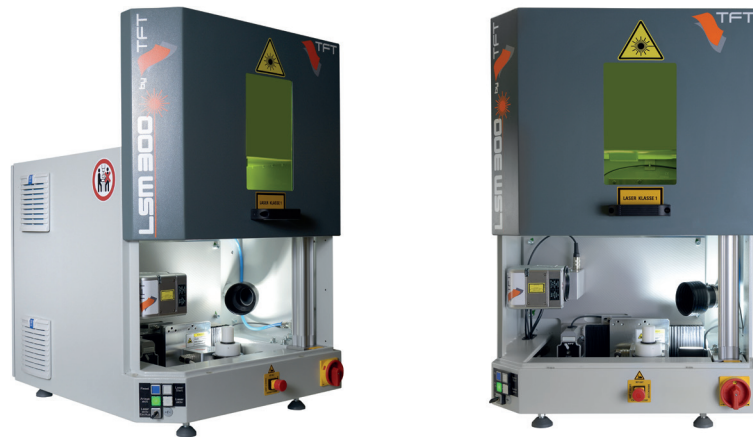
- Air cooled fiber laser with 2 axis high speed scan head
- USB port, Ethernet port
- Marking software on CD-Rom (Bitmaps, vector files, TrueType fonts, DataMatrix-Codes, Barcodes, QR-Codes)
- Control buttons, indicator lights and a key switches
- Monitoring interface for fume extraction system
- Laser Class 1 enclosure
- Laser safety window for process monitoring
- Red-dot laser for preview and easy setup of marking layouts
- Manual lift door with safety switch
- Focus adjustment via motorized worktable
- T-slotted worktable for easy installation of clamping devices

## Options

- Exhaust system
- Special adaptations on request



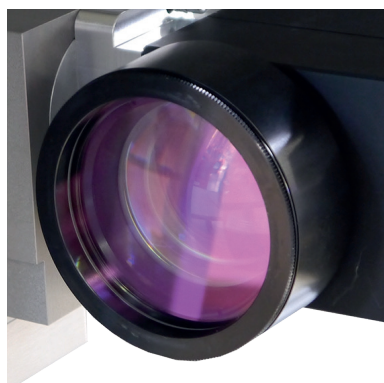
# Technical Data



## Technical Data

Power	20 W	30 W
Type	fiber laser	
Marking area	optional - see table below	
Wave length	1.060 -1.085 nm	
Pulse frequency	20 - 60 kHz	30 - 60 kHz
Operation temperature	0 - 45 °C	
Cooling	fan	
Energy consumption	< 1 KW	
Power supply voltage	110 - 230 Volt	
Dimensions (W/H/D)	600 x 960 x 700	
Weight	approx. 81 kg	

## Objective lenses



Model	100G	163G
Focus distance mm	98,8	189,9
Marking area mm	70 x 70	110 x 110

# Laser marking system LSM 700

The **LSM 700** laser cabin – a workplace laser marking system in compact size – is the ideal step into professional laser marking.

The fiber laser is characterized by a longlife time expectancy.

An air cooling and the resignation of consumables allows a maintenance-free operation and supports the very interesting price/performance ratio.

## Applications

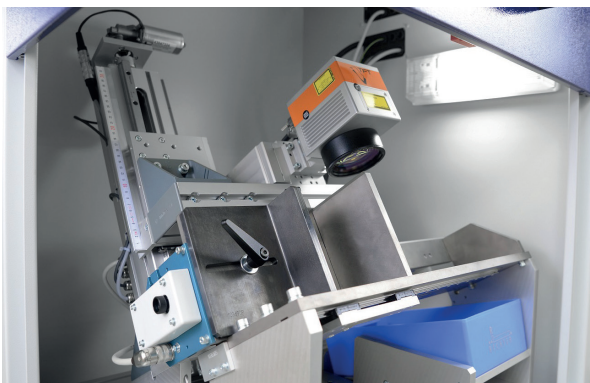
- Marking on metals, plastics, ceramics and more
- Laser engraving
- Laser cutting of thin materials

## Basic configuration

- Air cooled fiber laser with 2 axis high speed scan head
- USB and Network connections
- Fully integrated touchscreen PC
- Pre-installed laser marking software (Bitmaps, vector files, TrueType fonts, DataMatrix-Codes, Barcodes, QR-Codes)
- Control buttons, indicator lights and key switches
- Monitoring interface for fume extraction system
- Compact Laser Class 1 enclosure with integrated control cabinet
- Manual lift door with safety switch (for loading from the front and side)
- Laser safety window for process monitoring
- Red-dot laser for preview and easy setup of marking layouts
- Motorized focus adjustment
- T-slotted worktable for easy installation of clamping devices

## Options

- Upgrade to 100 Watts
- Fume extraction system
- Part rotator to mark on 360° circumference
- Subbase with casters
- Programmable focus adjustment
- Focus finder
- Constant wave fiber laser (CW)
- CO2 Laser
- YV04 Laser
- MOPA Laser
- Live on-screen image of the marking area via integrated camera
- Fully automatic tag feeder module for continuous production of name plates and optional ejection of name plates out of the cabin



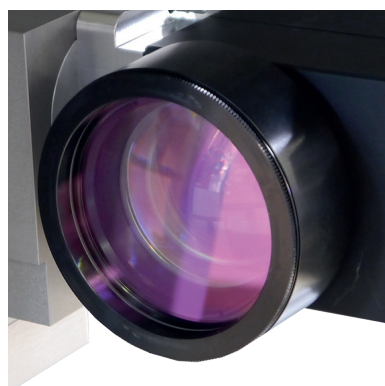
# Technical Data

## Technical Data



Power	10 W	20 W	30 W	50 W
Type	fiber laser			
Marking arey	optional - see table below			
Wave length	1.060 -1.085 nm			
Pulse frequency	20 - 60 kHz	20 - 60 kHz	30 - 60 kHz	50 - 100 kHz
Operation temperature	0 - 40 °C			
Cooling	fan			
Energy consumption	< 1 KW			
Power supply voltage	110 - 230 Volt			
Dimensions (W/H/D)	1000 x 940 x 740			
Weight	approx. 165 kg			

## Objective lenses



Model	100G	163G	254G	330G
Focus distance mm	98,8	189,9	288,9	385
Marking area mm	70 x 70	110 x 110	180 x 180	205 x 205

# Laser marking system LSM 1500

The **LSM 1500** large scale laser marking system of TFT is a universal useable laser marking system with large workspace, capable of marking large and heavy parts.

Thanks to 3 programmable high speed motor axis (X/Y/Z), the LSM 1500 utilizes nearly the entire work table. The solid steel work table comes with a threaded hole pattern to install fixtures and optional accessories. Covered openings on both sides and the rear allow the installation of optional extensions of the enclosure to accommodate long parts. Automated bulkheads and conveyor systems can also be attached to automate your part marking process!

Due to the modular extensibility, this system is very well suited for the laser marking of loaded pallets, heavy and large workpieces and name plates.

Our fiber laser is well placed in the market thanks to his long life time expectancy. Thanks to the easy learnable professional marking software you can realize nearly all marking jobs.

The integrated camera system allows an easy setup and process monitoring on the adjustable screen.

## Applications

- Marking on large, heavy and odd-shaped parts or loaded pallets
- Marking on metals, plastics, ceramics and more
- Laser engraving
- Laser cutting of thin materials

## Basic configuration

- Fiber laser with 2 axis high speed scan head
- Programmable high speed motor axis positioning system (X/Y/Z)
- USB and Ethernet connections
- Control buttons, indicator lights and key switches
- Monitoring interface for fume extraction system
- Fully integrated PC with pre-installed laser marking software (Bitmaps, vector files, TrueType fonts, DataMatrix-Codes, Barcodes, QR-Codes)
- Large Laser Class 1 enclosure
- Laser safety window for process monitoring
- Live on-screen image of the marking area via integrated camera
- Red-dot laser for preview and easy setup of marking layouts
- Motorized lift door
- Heavy-Duty steel work table with threaded hole pattern

## Options

- Part rotator to mark on 360° circumference
- Fully automated tag feeder
- Automated bulkheads and conveyor systems for single part and pallet handling
- Turn table for high part volumes (180°)
- Fully automatic plate feeder module for continuous production of name plates
- Enclosure extensions
- Robot integration for automated part handling
- Fume extraction system





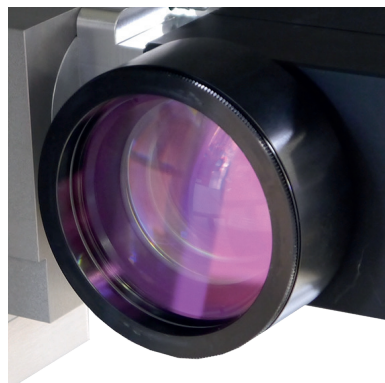
# Technical Data

## Technical Data



Power	30 W	50 W
Type	fiber laser	
Laser class	1	
Marking area	X=540 x Y=205 x Z=500	
Markable area	optional - see table below	
Clamping area	approx. 1000 x 800 mm	
Wave length	1.060 -1.085 nm	
Pulse frequency	30 - 60 kHz	50 - 100 kHz
Operation temperature	0 - 40 °C	
Cooling	fan	
Energy consumption	<1 KW	
Power supply voltage	110 - 230 Volt	
Dimensions (W/H/D)	1000 x 2000 x 1200	
Weight	approx. 620 kg	

## Objective lenses



Model	100G	163G	254G	330G
Focus distance mm	98,8	189,9	288,9	385
Marking area mm	70 x 70	110 x 110	180 x 180	205 x 205
Markable area mm	610 x 275	650 x 315	720 x 385	745 x 410

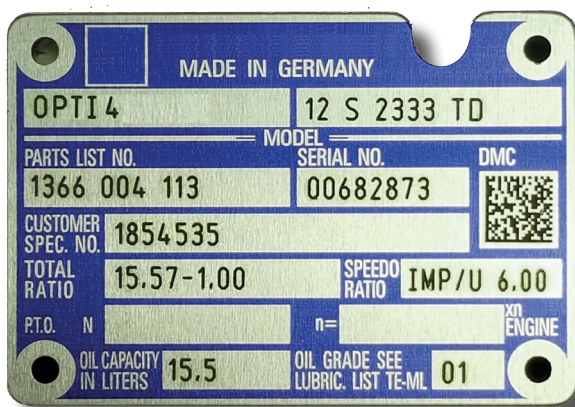
# Type plate laser LST 110

The **LST 110** type plate laser is a high-performance fiber laser for marking of tags and small parts. It is suitable for marking of metals, aluminum, plastic, ceramics, copper etc.

Particularly suitable for decentralized application at production line.

The small laser system contains an automatic type plate-drawer which guarantees easy handling. The large marking area allows a flexible scope of nameplate marking.

The fiber laser is characterized by a long lifetime at low power requirements and is nearly maintenance-free.



## Applications

- For marking of nameplates and small parts
- Laser engraving
- Laser cutting of material up to 0.3 mm thickness

## Basic configuration

- Laser source LSI 200
- Fiber laser with 2 axis high speed scan head and 19 inch control unit
- Large cooling unit
- Ethernet and Direct I/O connection, optional Profibus and Profinet
- Pre-installed marking software (Bitmaps, vector files, TrueType Fonts, DataMatrix-Codes, Barcodes, QR-Codes) and automation
- Compact laser housing of laser protection class 1 with automated parts drawer
- Red-dot laser for preview
- Laser safety window for process monitoring

## Options

- Fume extraction system
- Customer-specific component handling





## Technical Data

<b>Power</b>	<b>20 W / optional 30 W</b>
Type	fiber laser
Marking area	110 x 110 mm
Wave length	1.060 -1.085 nm
Pulse frequency	20 - 60 kHz
Operation temperature	0 - 45 °C
Cooling	fan
Energy consumption	<0,5 KW
Power supply voltage	110 - 230 Volt
Dimension laser (W/H/D)	380 x 495 x 700
Dimension control unit (W/H/D)	483 x 177 x 550
Maximum height of component	35 mm
Weight	approx. 63 kg

# Foil laser LSF 110

The **LSF 110** foil laser is a powerful fiber laser for marking and cutting of labels and safety films. It can be handled label-rolls, foils, shrink tubes and flat tubes up to 2 mm material thickness.

The used fiber laser is characterized by long life time expectancy at low energy requirements and is nearly maintenance-free. The large marking area offers high flexibility at label-marking and design.

## Applications

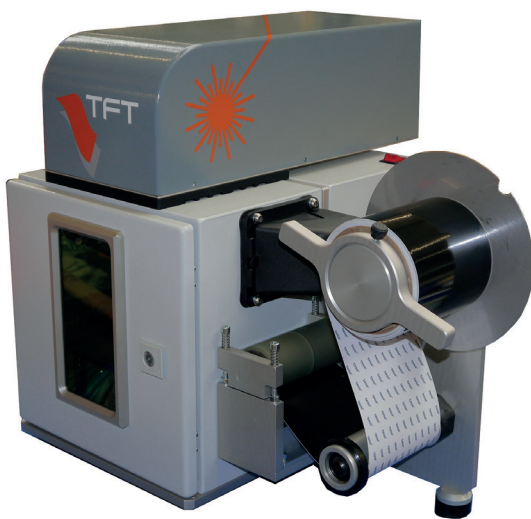
- For marking and cutting of labels and safety films
- Laser engraving
- Laser cutting of material up to 0.3 mm thickness

## Basic configuration

- Laser source LSI 200
- Fiber laser with 2 axis high speed scan head and 19 inch control unit
- Large cooling unit
- Ethernet and Direct I/O connection, optional Profibus and Profinet
- Pre-installed marking software (Bitmaps, vector files, TrueType Fonts, DataMatrix-Codes, Barcodes, QR-Codes) and automation
- Compact laser housing of laser protection class 1 with integrated foil transport unit as long as idling-roller control
- Red-dot laser for preview
- Laser safety window for process monitoring
- It can be used rolls up to 300 mm diameter

## Options

- Foil-cutter:  
Freely programmable cutter-function for material thickness up to 2 mm
- Automatic take-up spool:  
Foil width can be adjusted individually, fully automated operation through idling-roller control and Reel-to-Reel operation
- Peel-off-function:  
Rewind of backing material and supply of label at dispensing edge, Marking on demand function



# Technical Data



## Technical Data

<b>Power</b>	<b>20 W</b>
Type	fiber laser
Marking arey	110 x 110 mm
Foil width	max. 120 mm
Wave length	1.060 -1.085 nm
Pulse frequency	20 - 60 kHz
Operation temperature	0 - 45 °C
Cooling	fan
Energy consumption	<0,5 KW
Power supply voltage	110 - 230 Volt
Dimensions:	
Laser basic system (W/H/D)	850 x 495 x 700
Laser with Peel-Off (W/H/D)	1100 x 495 x 700
Laser with take-up spool (W/H/D)	1200 x 495 x 700
Laser with Peel-Off and take-up spool (W/H/D)	1400 x 495 x 700
Control unit (W/H/D)	483 x 177 x 550
Weight laser basic system	approx. 72 kg

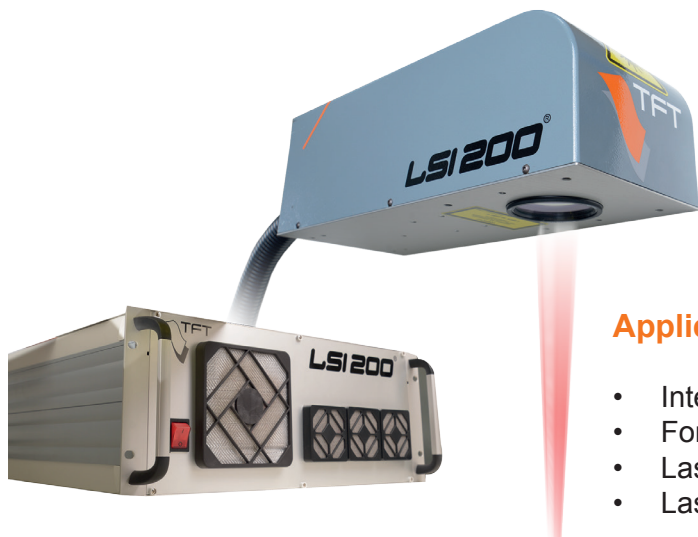
# Integration laser LSI 200

For integration into production lines please count on the powerful **integration laser LSI**.

It has been designed for fast, precise and forgery-proof product identification. Suitable for marking on metals, aluminum, plastics, ceramics, copper etc.

The LSI fiber laser is characterized by a long life time expectancy.  
Extensive software facilitates the integration into automated production processes.

A cost-effective realization of your own laser integration.



## Applications

- Integration into your automation
- For fast, precise and secure product identification
- Laser engraving
- Laser cutting of material up to 0.3 mm thickness

## Basic configuration

- Fiber laser with 2 axis scan head
- High speed thanks to galvo motors
- Large cooling unit
- Ethernet and Direct I/O connections, optional Profibus and Profinet

## Further variants

- Integration laser LSI 300 – 30 W
- Integration laser LSI 500 – 50 W

## Scope of performance

- Automation interfaces
- Pre-installed software and 19 inch controller
- Red-dot laser for preview

## Standardized extensions

- Foil laser LSF 110
- Type plate laser LST 110
- Marking laser LSM 300

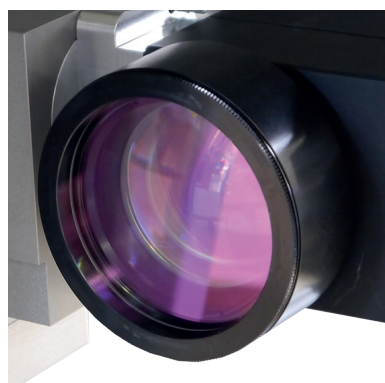
# Technical Data



## Technical Data

<b>Power</b>	<b>20 W</b>	<b>30 W</b>	<b>50 W</b>
Type	fiber laser		
Marking area	110 x 110 mm		
Wave length	1.060 -1.085 nm		
Pulse frequency	20 - 60 kHz	30 - 60 kHz	50 -100 kHz
Operation temperature	0 - 40 °C		0 - 30 °C
Cooling	fan		
Energy consumption	200 W	300 W	400 W
Power supply voltage	110 - 230 V		
Dimension laser head (W/H/D)	195 x 150 x 650		
Dimension control unit (W/H/D)	483 x 177 x 550		
Weight	approx. 28 kg		
Maximum cable length between laser head and control unit: 2,2 m			

## Objective lenses



<b>Model</b>	<b>100G</b>	<b>163G</b>	<b>254G</b>	<b>330G</b>
Focus distance mm	98,8	189,9	288,9	385
Marking area mm	70 x 70	110 x 110	180 x 180	205 x 205

## Companies of the Richter-Group

Joachim Richter Systeme und Maschinen GmbH & Co. KG develops, produces and sells marking machines and specialized solutions with success in Germany.



Joachim Richter  
Systeme und Maschinen GmbH & Co.KG  
Erlenhöhe 3 - 5 • 66871 Konken • Germany

Tel: +49 6384 9228-0 • Fax: +49 6384 9228-77  
E-Mail: [info@jr-richter.de](mailto:info@jr-richter.de) • Web: [www.jr-richter.de](http://www.jr-richter.de)

Furthermore the company represents itself with an own subsidiary in USA, which was founded in 2014 under the name of Richter Marking & Automation, Inc.

Richter Marking & Automation is part of the RICHTER family of companies.

The RICHTER group shows with that further branch not only international presence, but also demonstrates consistent customer orientation. Based in Duncan, South Carolina, Richter Marking & Automation serves as the primary contact for the American continent regarding systems sales, technical support and full-service repair including depot service along with a complete line of spare parts.

The photo shows the branch in Duncan, USA.



Richter Marking & Automation Inc.  
110 Aztec Ct # B  
Duncan, SC 29334, USA

Phone: +1-864-469-3304 • Fax: +1-864-469-3688  
E-Mail: [info@richterma.com](mailto:info@richterma.com) • Web: [www.richterma.com](http://www.richterma.com)

[www.tft-gmbh.com](http://www.tft-gmbh.com)

**TFT GmbH**  
Erlenhöhe 5 | 66871 Konken | Germany  
Telefon +49 6384 9228 - 0  
Telefax +49 6384 9228 - 77  
E-Mail [info@tft-gmbh.de](mailto:info@tft-gmbh.de)