



Software

Software programs for a fully-automatic, smooth production flow

Software for Laser Marking	Software for Laser Engraving	Further Software Solutions
FOBA MarkUS™	FOBA EMC (incl. 3D software FOBA 3D and axes control; marking software Fobagraf is required; optional: camera system IMP and online 3D deep engraving)	Customer-specific software for laser marking and laser engraving applications
Fobagraf		CAD Software
FOBA Draw (Smart Graph)		Remote diagnosis tool



Vision Systems

Focused on precision, economy, and marking and engraving quality without compromise

Intelligent Mark Positioning IMP	Point & Shoot™
Automatic visual component detection and marking/engraving alignment	Manual visual component detection and marking/engraving alignment
Perfect for automated series processing	Perfect for high-quality work pieces and individual part production
Patented vision system that automatically detects the position of work pieces and to be processed areas and aligns the marking, engraving or frosting precisely as required.	Camera system for the manual positioning of marking contents on to be marked products. The camera focuses (through the lens) on the marking field, creates an image of the component, and displays it in the user interface. The user creates the marking and places it (via drag & drop) precisely where it should be applied on the product.
Optical inspection for the validation of the final marking and checking of whether all information to be included has been marked.	
Both image-based processes allow an advance verification of marking and marking position and thus help to avoid expensive production stops and time-consuming trial-and-error processes.	



Accessories

Extensive options for more flexibility and broader application

- Suction systems for every application case
- Axes for linear and rotary movements
- Rotary tables and cross tables
- Height-adjustable work piece supports
- Safety windows for examining processing
- Marking heads for maximum marking flexibility and optimal application results
- Focus options for various marking fields
- Double heads (beam dividers and beam deflectors)
- Beam deflectors for marking of one/several components from different sides with just one laser and for the patented swing-free creation of flip images (Multiple Laser Images – MLI, Changeable Laser Images – CLI)
- Additional beam deflection units
- Pilot laser
- Touch probe
- Tactile probe
- Camera systems
- Inputs/outputs
- External order selection
- Profibus interface/TCP/IP
- Focus finder
- Focus shifter
- Online deep engraving for micrometer-precise adherence to specified engraving depths and defined relief heights
- Customer-specific software solutions
- Marking in motion: MOTF (Marking on the Fly)

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FOBA®

Laser at your service

Laser Marking + Engraving Solutions

Product Overview 2011

*Systems and Machines
for Laser Marking and Engraving*



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Basic Laser Marking Systems

For integration into production systems, special machines or FOBA laser marking and laser engraving machines

	Gas laser (CO ₂)	Fiber laser (Yb), pulsed	Fiber laser (Yb), cw	Nd:YAG	Nd:YAG, SHG	Vanadate laser (Nd:YVO ₄)	Vanadate laser (Nd:YVO ₄)
Power in Watts	10, 30, 50	9, 18, 27, 48	5, 10	50, 100	2, 8	10	2
Wavelength in nm	10,600	1,060 – 1,070	1,070	1,064	532, 1,064	1,064	355
Stimulation mode	RF-excited	Diode-pumped	Diode-pumped	Diode-pumped, lamp-pumped	Diode-pumped	End-pumped	Diode-pumped
Products	Gas laser markers: C.0100, LC100, LC300, LC500	Fiber laser markers: DP10F, DP20F, DP30F, DP50F, LF100, LF200 Grayscale fiber laser marker: DP30FGS	Cw fiber laser markers: LF050-5, LF050-10	Nd:YAG-laser markers: DP50, LP100, DN50A, LN100A	Frequency doubled solid-state laser marker: DP50SHG	Grayscale marking laser: DP10GS	UV laser marker: DP2UV

FOBA C.0100	ALLTEC LC100 and LC300	FOBA DP10F and DP50F	FOBA DP30FGS	ALLTEC LF100 and LF200	ALLTEC LF050	ALLPRINT DN50A	FOBA DP50 and LP100	FOBA DP10GS	FOBA DP2UV



Laser Marking Machines

Turn-key, customer-specific configured manual workstations or special machines for laser marking

	Vario S compact	Vario RD compact	Vario S	Vario RD	fiberhome
Basic laser markers for integration	Fiber laser markers: DP10F, DP20F, DP30F, DP50F	Fiber laser markers: DP10F, DP20F, DP30F, DP50F	Gas laser markers, grayscale laser marker DP10GS, Nd:YAG marking lasers DP50 and LP100	Gas laser markers, grayscale laser marker DP10GS, Nd:YAG marking lasers DP50 and LP100	Fiber laser markers: DP10F, DP20F
Features	Work table, pneumatic door	Rotary table, turning bulkhead wall	Work table, pneumatic door	Rotary table, turning bulkhead wall	Small contact area: 420 x 320 mm
Work piece weight	Max. 100 kg	Max. 16 kg	Max. 100 kg	Max. 16 kg	Laser class 1
Protection class	Laser class 1	Laser class 1	Laser class 1	Laser class 1	Laser class 1
Axes	Manual workstation with motor-adjustable Z-axis (software-controlled), expandable to max. 3 axes	Manual workstation with motor-adjustable Z-axis (software-controlled), expandable to max. 3 axes	Manual workstation with motor-adjustable Z-axis (software-controlled), expandable to max. 3 axes	Manual workstation with motor-adjustable Z-axis (software-controlled), expandable to max. 3 axes	Motorized Z-axis with 250 mm hub

		Version: loading from the side	Version: loading from the front	



Laser Engraving Machines

Highly-precise manual workstations and tool machines for laser engraving

	FOBA G3	FOBA G5	FOBA G10	FOBA GP9000
Laser types for integration	2-in-1 laser marking and engraving machine	With automatically height-adjustable laser head	With automatically height-adjustable laser head	Biggest, most powerful laser engraving machine
Features	Rotary table or X/Y table	Rotary table or X/Y table	X/Y table	X/Y table
Work piece weight	Up to 50 kg with X/Y table, up to 8 kg with rotary table	Up to 200 kg (100 kg with X/Y table)	Up to 100 kg (50 kg with X/Y table)	Up to 400 kg
Protection class	Laser class 1	Laser class 1	Laser class 1	Laser class 1
Axes	Up to 5 axes (X, Y, Z, swivel axis, mantle turning unit)	Up to 5 axes (X, Y, Z, swivel axis, mantle turning unit)	Up to 5 axes (X, Y, Z, swivel axis, mantle turning unit)	Up to 5 axes (X, Y, Z, swivel axis, mantle turning unit)

G3 with X/Y-table	G3 with rotary table	G5 pneumatic lifting door	G5 with manually-operated protection doors	G5 with rotary table		