



Laser Marking System Type Plate Handling THS4

Made in Germany.



Laser Marking System with Type Plate Handling LSG100-THS4.2 / THS4.3

The Type Plate Handling THS4.2 and THS4.3 offers - based on the approved laser safety housing LSG100 - a professional solution to fully automatically laser mark plates, mainly out of steel or plastics.

The system is especially developed for the industrial use to handle large quantities in serial production.

THS4.3 enables the plates in sequence. In addition to that, THS4.3 enables to handle the plates according to the FIFO principle with withdrawal even in the ongoing order processing. For priority orders both systems offer an express unloading slot. By software, ongoing orders can be interrupted and single plates can be locked out.

The stacks can be adjusted to different dimensions in a very easy way. Transport is independent of the plates' thickness.

Technical Data

Laser Safety Housing

Working Area l x w x h	980 x 980 x 460 mm	
F-Theta lens	160	
Marking area	112 x 112 mm	
Type plate	thickness	0.5 - 3 mm
	width	40 - 120 mm
	length	20 - 120 mm
Capacity un- / loader stack	250 mm	
Laser protection window	100 x 200 mm	
Z-Axis traversing range	500 mm	
Position accuracy Z	0.02 mm	
PLC	Siemens Simatic S7	
Focusing equipment	pointing laser 650 nm / < 1 mW / Kl. 2	
Aperture extraction system	DN 50	
Interior light	low energy light bulb, 11 W	
Operating door	pneumatic driven	
Placement	machine mount Ø 80 mm	
Mounting frame	2 x rack mount 19" 4HE	
Dimension l x w x h	1120 x 1210 x 2280 (w/o pivot arm)	
Chassis / colour	steel plate / RAL 7035	
Net weight	430 kg	
Weight operable installed	approx. 480 kg	

Operating Panel

LED-indicators	Power On Emission Collective Error	Laser Ready Mark in Progress Door Closed
Push button On/Off	Controls On Extraction On Pointing Laser	Air Supply Light
Push button	Close Door / Start	
Push button up / down left / right	Z-Axis Rotating Axis (n. c.)	
Interruptor	Emergency Stop	
Key switch	Manual or Automatic Operation	

Operating Panel THS

Select switch	Teach-, Automatic Operation
Push button	Start / Reference
Push button up / down	Stack Control

Interfaces

Marking laser system	FL10 / 20
Filtering devices	AF1/2/3/4
Interface RS232	axis control
Internal I/O interface	inputs / outputs

Status Monitoring

Safety interlock circuits	closed
Collective failure	marking laser system
Filtering device	change of filter
Loading stack	empty
Unloading stack	full

Operating Data

	LSG 230 V	LSG 120 V
Voltage	220-240 V AC	100-140 V AC
Frequency	50/60 Hz	
Fuse	16 A type B	15 A type B
Power consumption max.	3500 Watt	1750 Watt
Compressed air supply	4-6 bar (58-87 psi) oil free, dry	
Operating temperature	+10 - +35°C	
Air humidity	30 - 85% not condensing	
Laser safety class	class 1	
Approvals	CE	

Content of Delivery

Operating manual
Main supply cable
Connecting cable FL, length 3 m
Connecting cable PC, length 3 m
Connecting cable filtering device, length 3 m
Pivot arm for LCD/TFT Monitor w/ Keyboard Tray

Several Software applications are available to create plate layouts or to handle data import of process or type specific data.

Diode Pumped Ytterbium Fiber Laser

With the air cooled Ytterbium fiber lasers cab supplements the delivery program of high resolution, diode pumped marking lasers.

They mark on steel, aluminum, various plastics and many further materials with high beam quality and output power up to 20 watts.

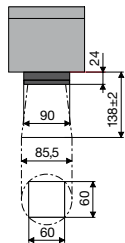
The software cablase provides a graphical interface for real-time control or the COM interface for customized programming. cab offers solutions for integration into manufacturing lines, laser safety workstations as well foil and type plate marking systems.

Technical Data

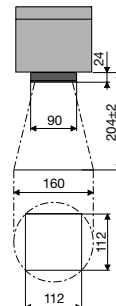
Laser Source	FL10	FL 20
Max. cw power	10 Watt	20 Watt
Pulse energy	0.5 mJ	1 mJ
Laser type	ytterbium fiber laser, pulsed	
Cooling	air cooled	
Wavelength	1064 nm	
Beam quality M ²	< 1.8	
Pulse width	80 - 120 ns	
Pulse frequency	20 - 80 kHz	
Pilot laser	650 nm / < 1 mW / Class 2	
Length fiber connection	4.5 m	2.5 m
Laser safety class	class 4	
Scan head		
Mounting	horizontal / vertical	
Scanning speed	max. 5000 mm/s	
Weight	8 kg	
Dimension h x w x d	110 x 170 x 330 mm	
Control Unit		
Supply voltage / frequency	100 - 240 VAC / 50-60 Hz	
Power consumption	350 Watt	450 Watt
Fuse (230 V)	2.5 AT	
Fuse (110 V)	5 AT	
Weight	17 kg	
Dimension h x w x d	178 x 420 x 420 mm	
Ambient Conditions		
Operating temperature	+5 - +40 °C	
Air humidity	15 - 90 % not condensing	
Interfaces		
PC-Interfaces	PCI, TCP/IP	
Laser Control Interface for	System Ready, Start Marking Laser Emission, Shutter/Chamber Interlock	
Marking Software		
Hardware	min. Pentium IV-PC, 500 MHz, min. 1GB RAM, CD-ROM-Disk, 2x PCI Slot (Version PCI), 150 MB free hard drive capacity, 10/100/1000 Ethernet-LAN RJ45,	
Operating Systems	Windows XP®, Windows 7®	

Font Types		
Font formats	All Windows TrueType Fonts, filled or as outline, laser specific Single-, Double and Tripple Line Fonts; all fonts can be freely scaled and „wobbled“.	
Font alignments	Any alignment and font direction, radial marking.	
Character width	Stretching and compressing possible.	
Graphics		
Graphic objects	Line, circle, rectangle, polygon. Hatch and cross hatch for all basic graphic objects.	
Graphic formats	PLT, DXF, BMP, JPG, PCX, WMF, EPS, TIF All graphic elements can be scaled, moved, rotated, grouped or mirrored. Special tools are available to tune, align and resize the objects.	
Barcodes		
Linear Barcodes	2 of 5 Code 39, Code 93 Code 128	Codabar EAN UPC
2D-Barcodes	Data Matrix, ECC200, QRCode	
	Barcodes are variable in height, module width and ratio. Tuning possibilities and Check Digit generation. Inverted marking possible. Inverted marking of code.	
Additional Features of the Marking Software		
	Serial number, date, time.	
	Variable fields.	
	Direct import of graphic data from Windows based applications.	
	Programmable laser parameters.	
	Process and parameter file saving.	
	Control of external and digital inputs and outputs is implemented in the software.	
	Additional axes (e.g. for lifting, rotating, linear axis) can be controlled.	
	cablase provides a COM Automation Server enabling the user to control the laser from any other user interface developed by e.g. Visual Basic, Borland Builder, provided the programming language has ability to communicate to COM-objects.	

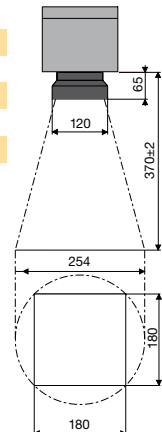
Plano Spherical Lens F-Theta	100
Working Distance mm	138±2
Marking Area mm	60 x 60
Spot Diameter µm	~25
Resolution dpi	1000



160
204±2
112 x 112
~35
725



254
370±2
180 x 180
~50
500



AF1



Exhaust and Filtering Device

Part No.	Device
5906614	Filtering Device AF1 230V
5906615	Filtering Device AF1 120V
Part No.	Accessories
5906616	Filter Set AF1
5906617	Pre-Filter AF1 305x305
5906618	Filter For Suspended Matter AF1 305x305x78
5906619	Activated Carbon Filter 300x300x115
5905818	Suction Hose 50 / 2.5 m
5906682	Connecting Sleeve Extraction Hose d=50
5550888	Cabel 1:1, 15/15-pins, 3m

Technical Data

Device Type		AF1	
Dimension l x w x h	355 x 355 x 655 mm		
Space requirement for filter change l x w x h	700 x 700 x 1000 mm		
Weight without filter equipment approx.	29 kg		
IP protection level	IP 42		
Suction capacity max.	100 - 320 m ³ /h		
Vacuum max.	12500 Pa		
Number of fans	1		
Electrical Power Supply Filtering Device			
Supply voltage	230 V AC	120 V AC	
Frequency	50 / 60 Hz		
Power consumption	1.2 kW		
Rated current	7.2 A	10 A	
Fuse	16 A	15 A	
Operating temperature	+5 - +35 °C		
Storage temperature	+5 - +40 °C		
Maximum installation altitude	2000 m		
Chassis material	steel plate powder coated		
Colour	RAL 7035		
Noise Level at Filtering Device			
Continuous sound pressure level	82 dB (A)		
Acoustic power level to CE DIN 45635-3 1m	67 dB (A)		
Filter Equipment			
Total surface area of particle filter approx.	2.20 m ²		
Total weight of gasfilter approx.	6.00 kg		
Total weight of filter equipment approx.	8.20 kg		
Automation Interface			
Status signal	Device OK		
Status signal	Error Filter 100%		
Switching contact	Device ON		
Further application specific filtering devices with increased suction capacity and additional filter equipment are available on request.			

Delivery Program Laser Marking System

LSG100-FL with Type Plate Handling THS4.2 / THS4.3

Part No.	Device
5528004.xxxx	LSG100-THS4.2-FLxx
5528005.xxxx	LSG100-THS4.3-FLxx
Part No.	Accessories
5901660	Protective Plastic Sheeting WetEx Keyboard
5525994	Transport Rollers Set
Part No.	Special Options
on request	PLC Visualization / Remote Service
on request	LSG100 Air Conditioning

All specifications about delivery, design and technical data are given to the best of our current knowledge and are subject to change without prior notice. **For more information go to www.cab.de**