cab
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Laser Marking System
THS Basic for Type Plates

Made in Germany

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.

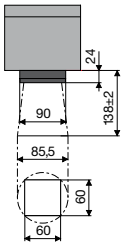
Technical Data

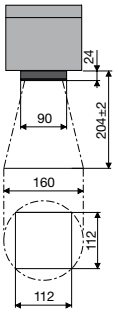
Laser Source	**FL10**	**FL 20**
Max. cw power	10 Watt	20 Watt
Pulse energy	0.5 mJ	1 mJ
Laser type	ytterbium fiber laser, pulsed	
Cooling	air cooled	
Wavelength	1064 nm	
Beam quality M^2	< 1.8	
Pulse width	80 - 120 ns	
Pulse frequency	20 - 80 kHz	
Pilot laser	650 nm / < 1 mW / Class 2	
Length fiber connection	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		
Temperature/humidity		
Operation:	+ 5 - 40°C / 10 - 85% not condensing	
Stock:	+ 0 - 60°C / 20 - 80% not condensing	
Transport:	– 25 - 60°C / 20 - 80% 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®	

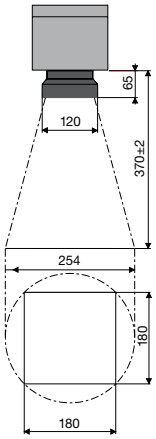
Font Types		
Font formats	All Windows TrueType Fonts, filled or as outline, laser specific Single-, Double and Tripple Line Fonts; all fonts can be freely scaled and „wobbled“.	
Font alignments	Any alignment and font direction, radial marking.	
Character width	Stretching and compressing possible.	
Graphics		
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.
Programable 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 Sperical Lens F-Theta	**100**	**160**	**254**
Working Distance mm	138±2	204±2	370±2
Marking Area mm ⊠	60 x 60	112 x 112	180 x 180
Spot Diameter µm	~25	~35	~50
≙ Resolution dpi	1000	725	500







Laser Marking System for Type Plates THS Basic

The THS Basic enables you to mark flat workpieces, preferable type plates made of metal or e.g. plastics precise and permanent.
Nevertheless the marking should contain bar code, text or graphics, the unique software application CABLASE marks your parts in a simply way and provides an intuitional operator front end for single and batch processing.
For marking 2D codes according to UID, HIBC or DIN/ISO additional software applications are available, able to interface to your PPS-system. cab is certified partner of SAP. Based on a universal software platform, all systems can become implemented.
Amongst others THS Basic will be applicable for production of e.g. gears, pumps, drives to manufacture specific plates or just for identification in series production.

Technical Data

Laser Safety Housing		
Working Area l x w x h	120 x 120 x 10 mm	
Workpiece carrier size	120 x 120 mm	
F-Theta lens	160	
Marking area	112 x 112 mm	
Working distance fixed	adjustable by adding distance shims	
Working distance nominal	205 mm	
Workpiece height max. mm	4	
Workpiece weight max.	0.5 kg (incl. carrier)	
Workpiece carrier	motorized with friction clutch	
Position accuracy	+/- 0.2 mm	
Repeatability	+/- 0.5 mm	
Aperture extraction system	DN 50	
Laser protection window	100 x 98 mm	
Interior light	LED	
Placement	desktop	
Dimension l x w x h	174 x 340 x 299	
Dimension l x w x h operable installed	174 x 596 x 406	
Chassis / colour	steel plate / RAL 9006	
Net weight	14 kg	
Weight operable installed	approx. 22 kg	
Operating Panel		
LED-indicators (at laser system)	Power On Emission Collective Error	Laser Ready Mark in Progress Shutter
Push button / indicator	Close Door / Start Open Door	
Interruptor	Emergency Stop	

Interfaces		
Marking laser system	FL10 / 20	
Filtering devices	AF1/2/3/4	
Internal I/O interface	digital bit mask for status monitoring	
Status Monitoring		
Safety interlock circuits	closed / ready	
Collective failure	marking laser system	
Filtering device	change of filter	
Workpiece	not loaded	
Workpice carrier	malfunction	
Operating Data	**LSG 230 V**	**LSG 120 V**
Voltage	110-240 V AC	
Frequency	50/60 Hz	
Fuse	1.4 A type B	
Power consumption max.	120 Watt (w/o laser)	
Noise level	<64 dB (A)	
Temperature/humidity		
Operation:	+ 5 - 40°C / 10 - 85% not condensing	
Stock:	+ 0 - 60°C / 20 - 80% not condensing	
Transport:	– 25 - 60°C / 20 - 80% not condensing	
Laser safety class	class 1	
Approvals	CE	
Content of Delivery		
Operating manual		
Main supply cable Typ CEE 7/7, length 3 m		
Connecting cable FL, length 3 m		
Connecting cable PC, length 3 m		
Connecting cable filtering device, length 3 m		

For current data, please go to www.cab.de/en/ths-basic

Scan this QR code with your smartphone and learn more about THS Basic.

AF1

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 fiter 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		
Continous 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.

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

Delivery Program Laser Marking System THS Basic

Part No.	Device
5528007.xxxx	THS Basic-FLxx
Part No.	**Accessories**
On request	Customized Workpiece Carrier

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**

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