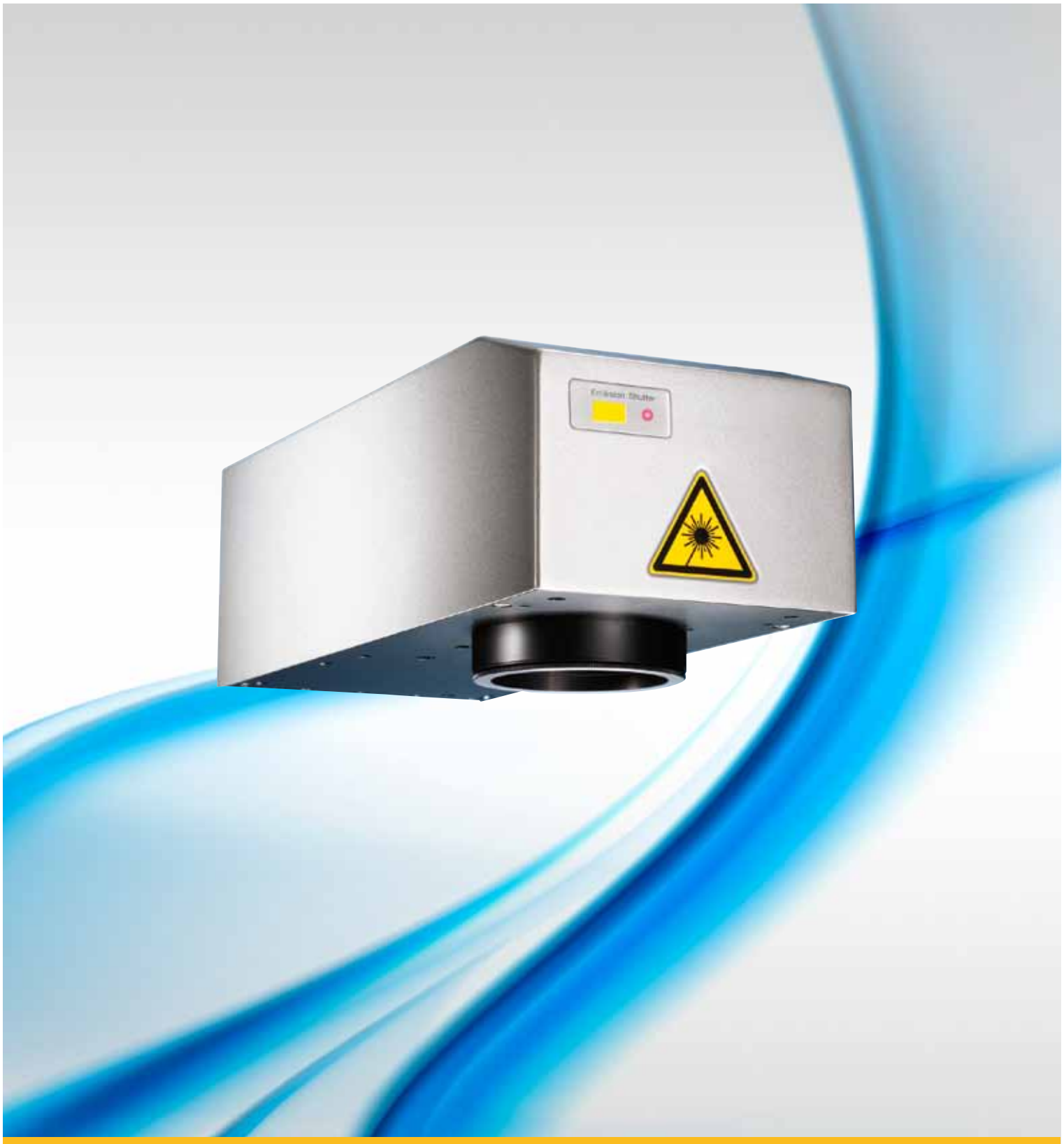
cab product marking



Marking Laser FL10 / FL20

Made in Germany.

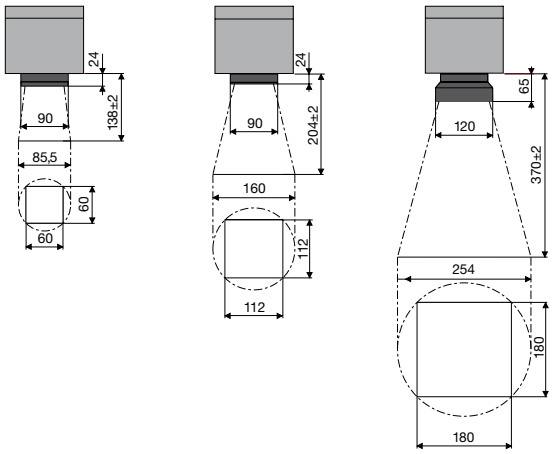
Diode Pumped Ytterbium Fiber Laser

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.

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	

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



Control Unit		
Supply voltage / frequency	100 - 240 VAC / 50-60 Hz	
Power consumption	350 Watt	450 Watt
Fuse (230 V), (110 V)	2.5 AT, 5AT	
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 System	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.		

Delivery Program Fiber Laser FL10 And FL20

Part No.	**Device**
5524908.xxxx	Marking Laser FL10-xxx PCI
5524906.xxxx	Marking Laser FL20-xxx PCI
5525006.xxxx	Marking Laser FL10-xxx TCP/IP
5526100.xxxx	Marking Laser FL20-xxx TCP/IP

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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