

The M-Box MOPA Fiber Laser Marking System marks surfaces of suitable Materials with an invisible Laser beam (1064nm). The System has been manufactured to up to date standards and Safety Regulations Requirements. There is, nevertheless, a risk of harm and/or injuries to other Goods or Personnel.

M-Box

Weight: 70kg
Dimensions: L 768mm * W 430mm * H 744.90mm
Max. workpiece size: L 240mm * W 360mm * H 300mm
Includes a focus finder and electrical Z-Axis

Operating Conditions

Environmental Conditions

Operating Condition.: Dust free, no radiation
Operating Temp.: 15°C to 25°C (room temp.)
Storage Temp.: 0°C to 40°C
Relative Humidity: max. 90% (non condensing)
Max. elevation above NN: max. 1000m

Electrical Connections

Currents

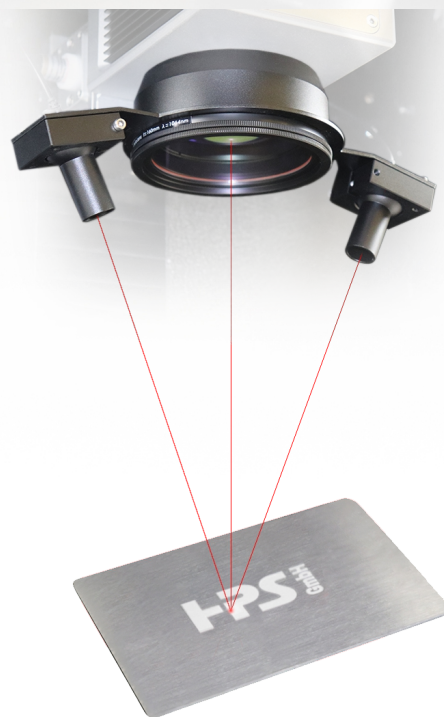
Mains: 220 V AC single phase
Mains Tolerance: $\pm 10\%$
Frequency: 50 – 60 Hz
Harmonic Distorsion: max. 10 %
max. Interruption: 3 ms
Power Consumption: max. 600 W (FBox-20Q)

System connection and driver setup

The FBox Laser Marking System supports USB connection to the computer, which should meet below requirements

- CPU Core i3 or above
- USB 2.0 port or above
- Windows 2000 SP3, XP, Vista, Win 7, Win 8, Win 10
- RAM 1G or above, HDD 32G or above
- Display SVGA color

If users need to create graphic vector files for marking on the same computer, please refer to requirements from according software.



Laser source	1064nm MOPA Fiber Laser
Nominal Laser Power	30W
Beam Quality M ²	<1.5
Beam Diameter	6-9mm
Pulse Width	1~350ns
Frequency	35-2000 KHz
Pulse per Energy	0.85mj
Peak Power	-
Long-term Power Instability	5%
Cooling System	Air Cooling
Aiming Diode	Intergrated Visible Red Laser Diode, $\lambda=635\text{nm}$
Laser Protection Class	 LASER CLASS 1

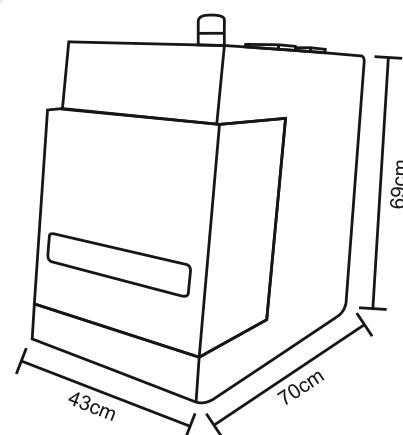


FBox

Weight	70kg
Dimensions	L 768mm * W 430mm * H 744.90mm
Electrical Connection Values	115V - 230V VAC 50 - 60 Hz
Operating Temperature	+10 to +35 °C (46 to 95°F)
Humidity	< 90% non-condensing
Max. workpiece size	L 240mm * W 360mm * H 300mm

Scan Head

F-Theta Lens	FL 160/163
Marking Area	100 * 100 mm
Spot Size in Focus	0.15mm



Min. Line Width	0.01mm
Min. Character	0.15mm
Working Distance (to Lens)	180±2mm
Scan Speed	Up to 5000 mm/s

Marking Software

Min. Hardware Requirements	
Operating System	Windows XP, Win 7, Win 8, Win 10
Min. Memory	RAM 1G or above, HDD 32G or above
Display	SVGA Color

Text

Fonts	True-Type (filled/unfilled), Single-Line Fonts
Orientation	User Defined
Letter Spacing	User Defined
Arc Text	Scalable and adjustable

Graphic

Elements	Line, Rectangle, Circle, Ellipse (filled/ unfilled)
Formats	<u>Vector</u> : *.plt, *.dxf, *.ai, *.svg <u>BMP</u> : *.bmp, *.jpg, *.jpeg, *.gif, *.png

Specials

Focus finder
Electrical Z-Axis
Live View



mBOX30