

Laser Marking Systems and

applications

Computer Keyboards

- An entire keyboard can be marked in a single operation

Automotive Products

- Removal of an opaque top coat from a translucent plastic substrate to create day/night displays
- Marking layout, current ratings and protection information on fuse box covers

Electronic Components

- Marking epoxy packaged ICs and other micro components
- Cleaning epoxy flash material from capacitor legs

Medical Implants

- Mark heart pacemakers and replacement joints

Surgical Instruments

- Produce two dimensional codes on surgical steel instruments

Communications Equipment

- Removing an opaque layer from a translucent substrate to create back-lit mobile phone keypads

Agricultural Supplies

- Replacement of hot foil marking to manufacture livestock identification tags

Promotional Products and Giftware

- Mark text and graphics on pen barrels, key rings, knives, trophies, picture frames, plaques, etc.

Tools and Gauges

- Marking logos, text and part numbers on drills, saw blades, milling cutters, chucks and collets

Light Shows

- Removal of metallic coatings from glass discs to produce gobos used in light shows

General Engineering

- Marking text, graphics and part numbers on ball and roller bearings, gears, shafts, etc.

product range

Laser	Laser Type	Wavelength	Excitation	Applications
<i>Raptor</i>	EF Technology	1064nm	Diode	plastics, metals, delicate substrates
<i>Scorpion</i>	Yb:Fiber	1060-1080nm	Diode	plastics, metals, delicate substrates
<i>Scorpion Rapide</i>	Yb:Fiber	1060-1080nm	Diode	plastics, metals, delicate substrates, enhanced graphics
<i>Razor</i>	CO ₂	10.6µm	Sealed RF	glass, wood, plastics
<i>Cobra</i>	Nd:YAG	1064nm	Diode	metals, plastics
<i>Cobra V-12/20</i>	Nd:Vanadate	1064nm	Diode	plastics, delicate substrates
<i>Cobra-G</i>	Nd:Vanadate	532nm	Diode	plastics, exotic colors
<i>Sc̄riba*</i>	Nd:YAG	1064nm	Lamp and Diode	metals, plastics

*twin headed models also available

Scorpion Yb:Fiber
laser marker





laser characteristics

Laser	Operating Mode	Pulse/Modulation Frequency	Marking Speed
<i>Raptor</i>	CW or Q-switched	0.1 to 100 kHz	up to 10,000 mm.s ⁻¹
<i>Scorpion</i>	Pulsed	20 to 80 kHz	up to 10,000 mm.s ⁻¹
<i>Scorpion Rapide</i>	CW or Q-switched	0.1 to 100 kHz	up to 10,000 mm.s ⁻¹
<i>Razor</i>	Modulated CW	up to 25 kHz	up to 5,000 mm.s ⁻¹
<i>Cobra</i>	CW or Q-switched	0.1 to 100 kHz	up to 10,000 mm.s ⁻¹
<i>Cobra V-12/20</i>	CW or Q-switched	0.1 to 100 kHz	up to 10,000 mm.s ⁻¹
<i>Cobra-G</i>	CW or Q-switched	0.1 to 100 kHz	up to 10,000 mm.s ⁻¹
<i>Scriba</i>	CW or Q-switched	0.1 to 50 kHz	up to 5,000 mm.s ⁻¹

marking areas

Lens Focal Length	Square Marking Area	Circular Marking Area (diameter)	Working Distance
EF Technology, Yb:Fiber, Nd:YAG, Nd:Vanadate lasers*			
100 mm	60 x 60 mm	85 mm	106 mm
163 mm	100 x 100 mm	140 mm	184 mm
254 mm	160 x 160 mm	220 mm	323 mm
410 mm	250 x 250 mm	350 mm	512 mm

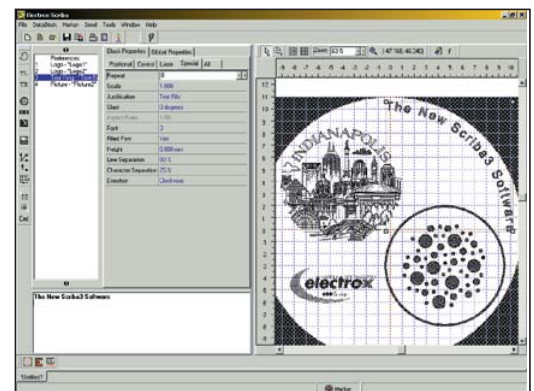
*except *Cobra-G*, see separate leaflet for details

CO₂ Lasers

Lens Focal Length	Square Marking Area	Circular Marking Area (diameter)	Working Distance
100 mm	60 x 60 mm	85 mm	79 mm
150 mm	94 x 94 mm	130 mm	128 mm
250 mm	154 x 154 mm	218 mm	236 mm

software

- User-friendly graphical interface
- Full compatibility with all current versions of Windows™
- Fast file transfer to the laser
- File import formats: PLT (HPGL), AI, DXF, PNL (Electrox), BMP, TIFF
- Bar Codes
- Two Dimensional Codes including Data Matrix
- Automatic Serialization
- File Input Programming (Mail Merge)
- Date Coding
- Fill Editor
- Motion Control (4 Axis)
- Multiple I/O Interface



Software interface

marking solutions

tabletop workstations

E-Box and *MaxBox* packaged solutions with integrated EF Technology or Yb:Fiber laser

Customized solutions with rotary work holding options
Indexing turntable variants



MaxBox packaged marking solution



Tabletop workstation with indexing turntable



Maxim dial index marking solution



Customized *Maxim* workstation with xy positioning, rotary workholding and vision system

handling options

Integrated production line systems with a choice of continuous or batch component feed systems

Programmable z-axis, rotary work piece handling, xy positioning and vision options according to model



xy positioning



Rotary workholding



Electrox manufacturing facility

track record

Electrox was established more than 30 years ago and was first to commercialize a compact fast axial flow CO₂ laser.

Now a member of the 600 Group plc, Electrox has the financial stability to ensure on-going customer support world-wide.

There are over 3,000 Electrox lasers in regular daily service in over 40 countries throughout the world.

Through its international sales and distribution network Electrox delivers service and support worldwide.

Comprehensive applications development facilities provide manufacturing solutions to a broad range of industries.



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