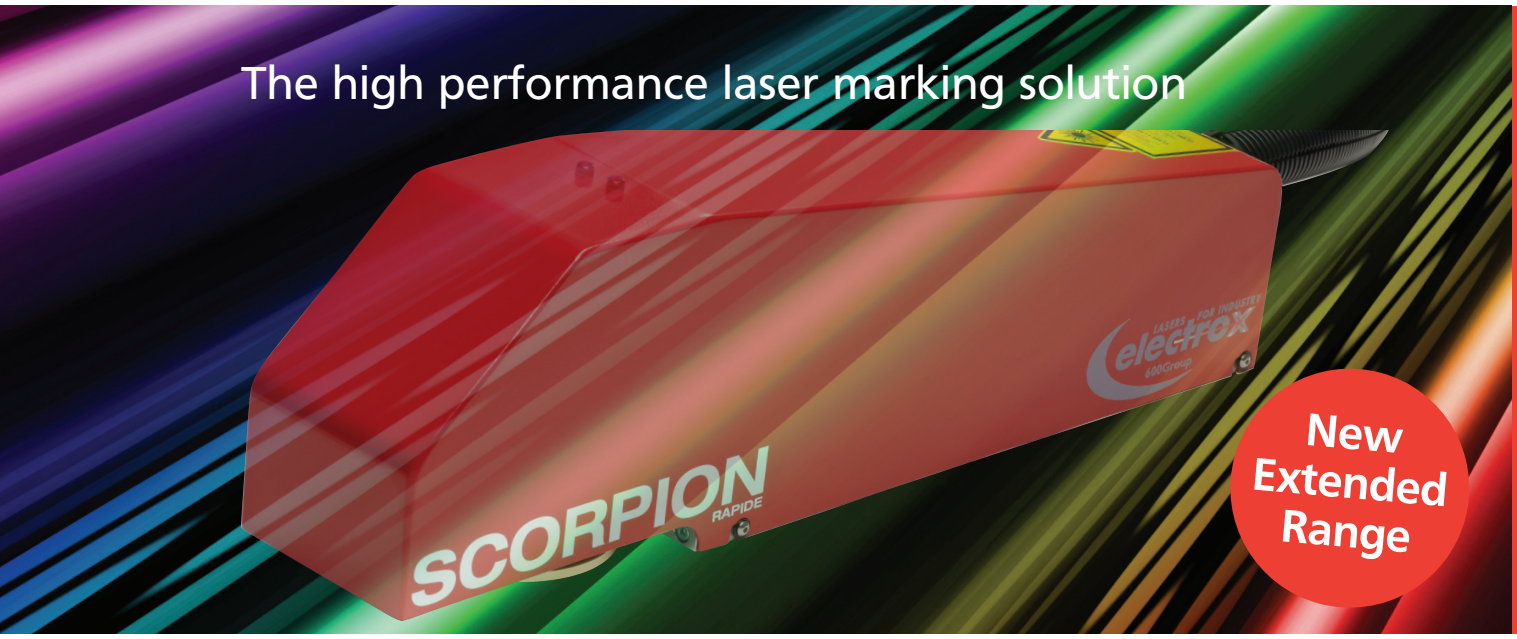
SCORPION
RAPIDE

The ultimate laser for marking, engraving, etching and pulsed micro-machining



- Ideal for high speed, high resolution operations on a wide range of materials including metals and plastics
- Complete control of the laser beam parameters to permit a wide range of marking finishes
- Extremely low operational cost and virtually maintenance free
- Up to 20kW peak power with 70W average power

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SCORPION RAPIDE offers a wider range of optic fiber galvo based laser processing solutions

Single Mode M^2 <1.3
Generating very fine features <20 microns with high power stability and large depth of field

Z Mode M^2 ~1.0 <1.6
Provides an excellent beam quality for generating very fine features with a slightly greater spot size than the single mode for improved productivity

Low Mode M^2 <2
General marking applications giving slightly larger spots and features that are more appropriate to making marks visible to the naked eye

High Mode M^2 ~3.2
Offering higher pulse energies, and peak powers and even larger spots ideal for wide lines, filled font type applications and large area coverage

✓ =Optimal for ✓ =Good for

Type	Single Mode	Z Mode	Low Mode	High Mode
Applications				
Ablation	✓	✓	✓	✓
Cleaning			✓	✓
Drilling	✓	✓	✓	✓
Engraving, deep		✓	✓	✓
Engraving, fine	✓	✓	✓	
Marking, anodized and painted materials	✓	✓	✓	✓
Marking, general		✓	✓	✓
Marking, metal	✓	✓	✓	✓
Marking, night and day	✓	✓	✓	✓
Marking, plastic	✓	✓	✓	✓
Micro-machining	✓	✓		
Precision cutting	✓	✓		✓
Scribing	✓	✓	✓	
Solar cell processing	✓	✓	✓	✓
Thin film patterning	✓	✓	✓	✓

Product selection parameters

Laser	Frequency Range (KHz)	Average Power (W)	Max. Peak Power (kW)	Max. Pulse Energy (mJ)	Pulse Duration (nS)
SCORPION RAPIDE II LT	0.1-200	20	14	0.8	Fixed 250
SCORPION RAPIDE II ZEP	CW, 0.1-1000	20	12	1	Variable 3-500
SCORPION RAPIDE IV HHS	CW, 0.1-1000	38	20	1.25	Variable 9-250
SCORPION RAPIDE V SHS	CW, 0.1-1000	50	7	0.55	Variable 9-250
SCORPION RAPIDE VII ZRM	0.1-200	70	10	1	Fixed 250

Marking area parameters

Flat Field Focal Length (mm)	Max. Square Marking Field (mm)	(ød) Max. Marking Diameter (mm)	(Fd) Working Distance (mm)	*Spot size (typical)			
				•S Mode	•Z Mode	•L Mode	•H Mode
100	60	85	106	18µm	21µm	25µm	43µm
163	100	140	184	25µm	28µm	35µm	60µm
254	160	220	323	36µm	41µm	50µm	86µm
350	220	310	432	50µm	58µm	70µm	120µm
410	250	350	512	59µm	69µm	82µm	141µm

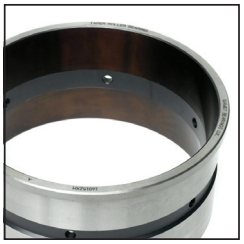
*Beam expander and galvo mirror dependent

Laser specification

(All types)

Laser type	Yb:Fiber	All
Wavelength	1060–1080nm	All
Max. marking speed	10,000 $mm.s^{-1}$	All
Operating temperature	Up to 40°C (non condensing)	All

Power stability	±1%
Control electronics	19 inch rack mounted (5U) module
Supply requirement	Single phase + Earth, 50 or 60Hz; 100 - 240V. Power 250W
Weight	Laser 12Kg, Control Unit 21Kg



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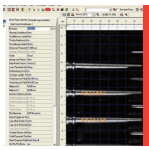
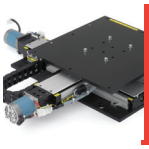
Accessories



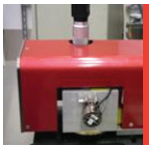
Vision
Video camera for viewing objects to aid marking and alignment



XY Table
For marking large objects or for step and repeat with small objects

Rotary Axis
For marking cylindrical components

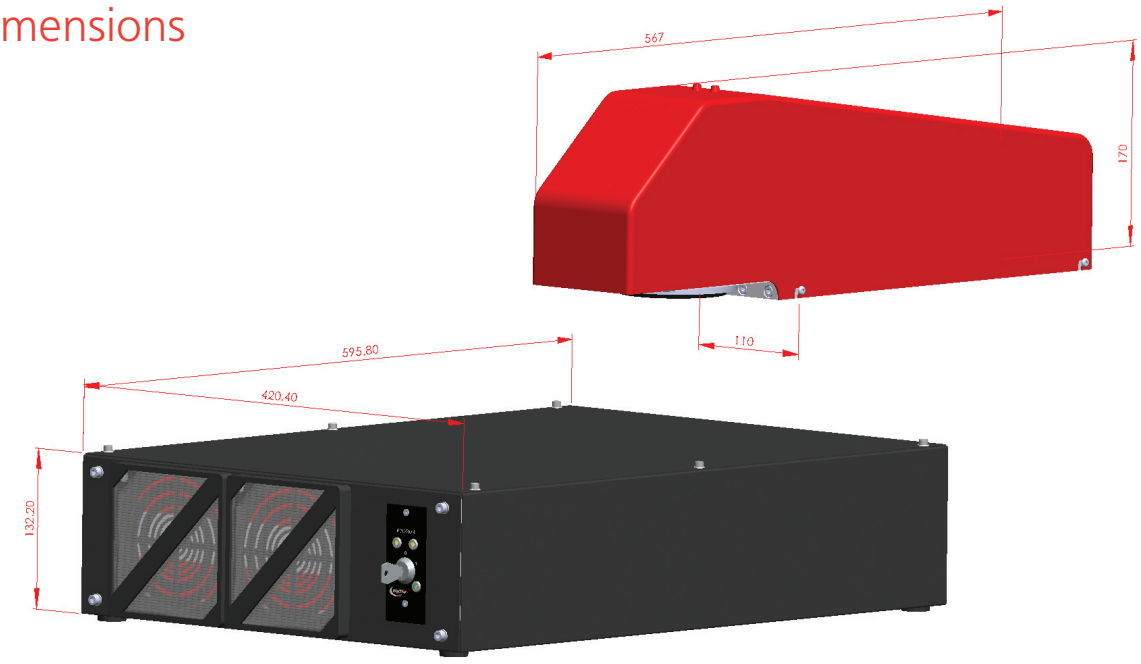
Focus Finder
Laser diode to assist with focus settings



Code Reader
For fine barcodes, alpha numeric and data matrix codes

Extraction
For extraction of fumes and removal of dust and debris generated by the marking process

Dimensions



Disclaimer: Specification and dimension drawings are provided purely for guidance purposes only. We reserve the right to change these at short notice.

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Leading laser marking systems

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