



Sienna Rapier

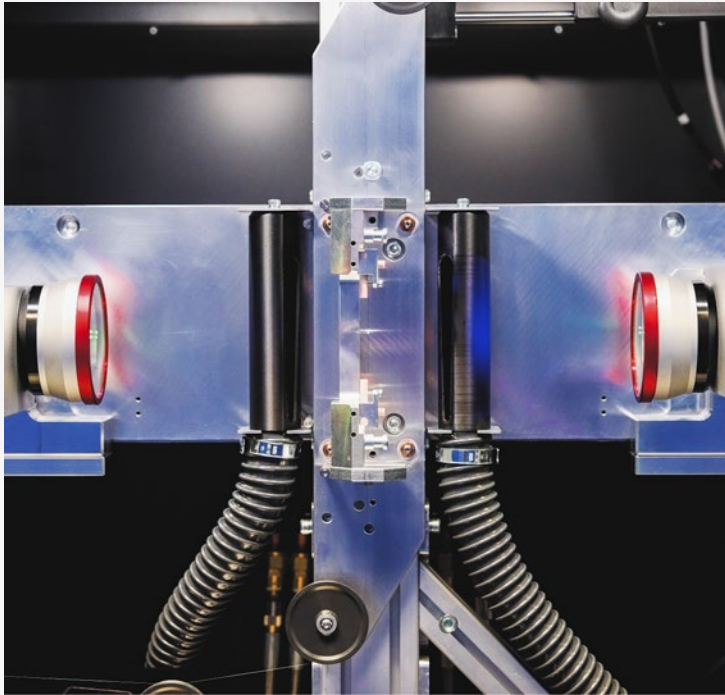
**Laser Wire Stripper
For Fine & Ultra-Fine Magnet Wire**

Laser Stripping At Its Finest

Sienna Rapier

Laser Precision Meets Productivity

The Sienna Rapier is a state-of-the-art laser wire stripping system engineered for precision processing of fine and ultra-fine magnet wires. Designed specifically for medical and other high-reliability industries, it delivers micron-level accuracy, repeatable quality, speed and unmatched safety.



Sienna Rapier Internal View

Benefits

- **Micron-Level Accuracy:** Ensures consistent, repeatable results for processing delicate components
- **Non-Contact Process:** Eliminates mechanical stress and risk of conductor damage
- **Reel-to-Reel Processing:** Enables continuous, automated wire handling, significantly reducing manual labour, processing time and waste
- **Enhanced Electrical Contact Strength:** Clean, residue-free removal without damaging conductors. Prepares ultra-clean surfaces for reliable bonding
- **Eco-Friendly:** Eliminates hazardous chemicals like acid baths and carcinogenic solvents
- **Cleanroom Ready:** Fume extraction ensures debris-free processing (depending on class)

Micron-Level Precision

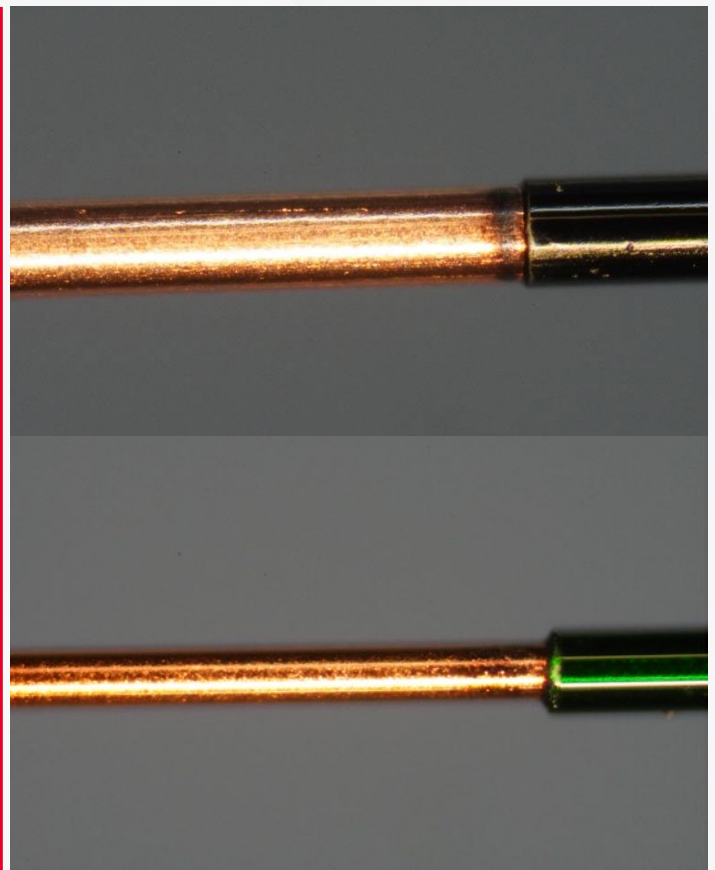
Our dual laser stripping system is designed for precise and repeatable stripping of fine magnet wire, operating seamlessly from reel to reel. Advanced temperature regulation ensures consistent performance and eliminates thermal expansion, maintaining micron-level stripping accuracy.

Enhanced Long-Term Productivity

Built for efficiency, the system can run fully unattended ("lights-out") and performs reliably under standard factory conditions, thanks to its integrated temperature and fume control. A powerful extraction unit removes all fumes, while a lower catch tray captures larger particles – protecting the optical components and ensuring long-term reliability.

Smart Wire Handling

The customisable dereeling system can be configured to handle wires as fine as 54 AWG, adapting to a wide range of applications. Controlled entirely by a PLC-based system, the machine offers remote monitoring and job loading, making it a fully networked solution for modern manufacturing environments.



30 AWG (top) and 40 AWG (bottom)

Technical Specifications

STANDARD FEATURES

Processing Specifications	Wire gauge	26 - 54 AWG*
	Stripping length	0 - 100 mm / 0 - 3.9 in
	Processing area	100 x 100 mm / 3.9 x 3.9 in
	Wire type	Magnet wire
	Insulation material	PUR, PES, PEI-AI, PAI, enamels, resins, etc.
	Stripping speed (max)	3000 mm/s / 118 in/s
	Spool weight (max)	10 kg / 22 lbs
System Specifications	Laser type and power	Dual 3 W UV DPSS lasers
	Beam delivery system	Dual galvo scanning systems
	Configuration	Reel-to-reel wire processing
	Temperature control	Liquid cooled chamber
	Dimensions (W x D x H)	1850 x 1450 x 2020 mm / 72.8 x 57.1 x 79.5 in
	Weight	550 kg / 1213 lbs
Control and Software	Machine control architecture	Siemens PLC
	Interface	Height-adjustable HMI touchscreen
	Communications	Ethernet
	Program configuration	Spectrum Technologies bespoke program
	Program recipes	CSV, manual input
Environmental and Operational Conditions	Operating temperature	+15°C to +35°C / 59°F to 95°F
	Operating humidity	< 85%, non condensing
	Noise level	< 75 dB
Power, Air and Fume Management	Electrical connection	230 VAC / 50Hz 1P
	Electrical consumption	1.6 kW
	Fume extraction	BOFA AD Nano+
Compliance and Standards	Conformity	CE, FDA, FCC, Machinery Directive, Class 1 laser
	Standards	ISO 9001

ACCESSORIES AND OPTIONS

Fume extractor
Fume extractor replacement filters
Extended warranty

*Depending on validation testing

About Spectrum Technologies

Company Overview

Spectrum Technologies has been at the forefront of laser wire processing technology for over 35 years, developing and applying leading edge technology to provide solutions to problems in advanced manufacturing.

Founded in 1989 as a spin-out from BAE Systems' Advanced Technology Centre, the Company pioneered and commercialised UV laser wire marking within the aerospace industry – a process that has since become the global industry standard for identifying aerospace wire and cable. Spectrum has been independently owned since the management buyout in 1994.

Today, Spectrum Technologies is recognised as the world leader in the design and manufacture of specialised laser-based wire processing equipment. Its solutions are widely used in the production of complex wire harnesses and assemblies across aerospace, defence, medical, rail, automotive, and other critical industries.

Decades of Expertise in Medical Precision

With a heritage in the medical sector dating back to 1995, Spectrum Technologies brings proven experience and innovation to advanced medical manufacturing. Our laser systems are trusted by leading global manufacturers to meet the growing demand for miniaturisation and absolute accuracy when processing delicate wires and cables. Applications include auditory hearing devices, catheters, neuromodulation devices, cardiac rhythm management devices, and advanced imaging equipment.

To discuss any of your requirements please contact us at sales@spectrumtech.com or on +44 (0)1656 655 437.



Scan for more



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