SPECTRUM TECHNOLOGIES

THE QUEEN'S AWARDS FOR ENTERPRISE 2006

SIENNA™ 200 series

Dual beam laser wire stripping system for small gauge wires used in consumer electronics, critical medical and telecommunications applications.

stripping

SIENNA
Laser wire strippers

Compact Laser Wire Stripping Systems offering unequalled damage-free, high quality wire stripping.

The SIENNA 200 series of laser wire strippers has been developed to provide the highest quality, most reliable, method of removing today's high technology wire insulations without damage to the conductors. The systems are compact and portable giving great mobility within the manufacturing environment. They provide the highest quality insulation stripping of a wide variety of wire types, sizes and configurations.

The systems contain the laser, optical system, control electronics, power supplies, and mechanical components. Air cooled lasers are used throughout the range to avoid the need for chilled water supplies. Air exhaust, if not available on site, can be provided by the optional self-contained ACS-4 Air Cleaning System.

Process rates vary accordingly offering flexibility for differing production requirements. We will be pleased to discuss your particular requirements and advise on the most appropriate model.

The optical system directs the laser beam to a set of focusing heads which move on a single axis motion system. The embedded Micro Processing Control System alternates the laser beam between the top and bottom head to completely remove a thin line of insulation at the desired distance from the end of the wire.

Features

- Highest quality - the laser does not damage the conductor, plating, or other metallic surfaces
- Extremely accurate, consistent performance, high process yields
- Strips many wire configurations such as single wire, twisted pairs, coaxial and ribbon cables
- Processes multiple wires or cables simultaneously
- Laser strips high temperature, hard or soft insulation materials
- Performs end strips and crosscuts

The SIENNA 210S is a single axis CO_2 infra-red laser system suitable for end stripping a wide variety of cable types. Both ribbon and single cables can be stripped with multiples being processed simultaneously within the scan area of 4" (100mm).

The SIENNA 210D is a dual axis CO_2 infra-red laser system that provides another level of functionality. Whereas the SIENNA 210S moves the laser beam in one direction, the SIENNA 210D moves it in two directions thus giving two axis of movement. This additional capability allows the machine to perform a cross-cut and slit operation to aid slug removal and window strips for terminations in the centre of a wire. The standard scan area is 4" x 4" (100mm x 100mm).

Although the system is easily programmed via the front panel keypad, an easy to use computer software interface is provided which allows for programming via a PC thus enabling a large number of wire file programs to be created and stored.

The SIENNA 210D has the flexibility to adapt to a wide variety of wire and cable sizes and shapes with the added ability to successfully strip both common and complex wire insulators.

Typical applications

SIENNA laser wire strippers have been developed to meet the requirements of many modern day industries. Typical uses of the SIENNA 200 series are as follows:

- **Aerospace**
  Used mainly in wire harness manufacturing.
- **Space**
  Used in European and US space programs, including for the Space Shuttle, Hubble Space Telescope (HST).
- **Medical**
  Strips the fine wires used for medical imaging systems, ultrasound transducers & intro-vascular medical devices
- **Electronics**
  For computers (link between the flat panel displays and the motherboards in laptops/notebooks) and telecommunication applications (mobile/cell phones, GPS navigations systems and wireless applications).
- **Automotive**
  Specifically used in airbag harnesses.

For further discussion on uses & applications of the SIENNA 200 series, we would be happy for you to contact us.

ACS-4 (Air Cleaning Systems)

The optional ACS-4 will remove smoke and debris from the laser stripping area, filter it, and return clean air to the room. It is a small compact unit with a power requirement of 3 amps that can be located anywhere near the SIENNA 200, and contains a removable multistage filter which removes:

- Particulates
- Smoke
- Odours
- Halogens and toxic gases

SIENNA 210S

Twin lead end-stripped

End-stripped fibreglass wire

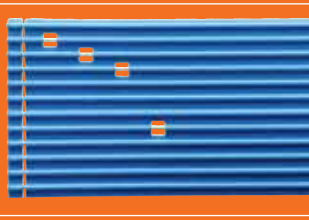
InfinibandTM cable
with aluminised mylar shield

SIENNA 210D

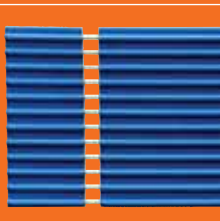
End-stripped multicore cable

Mid-strip window

Programmed pattern



Window in ribbon cable



quality, accuracy and performance

www.spectrumtech.com

sales@spectrumtech.com

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SIENNA 200 series

Summary specification

Laser	• Reliable sealed infra-red laser • Class 1 laser product for use on open shop floor
Control	• System controlled by Micro-processing System with easy to use operator control panel
Wire size	• Wire and cable from 50 AWG to 8 AWG, either singly or laid in parallel up to a total maximum width of 4 inches (100 mm) • 4 inches(100mm) x 4 inches(100mm) wide for Dual Axis system
Wire configuration	• Single core wire • Twin leads • Twisted pairs • Multi-conductor • Ribbon • Coaxial cable
Types of insulation	Teflon® (PTFE), Tefzel® (ETFE), Polyimide Kapton®. Other hard, soft or high temperature insulations. Processing speed varies with the choice of insulation. Please contact Spectrum Technologies to discuss your particular application and requirement ® Registered Trademarks of DuPont

Mechanical specifications

Laser:	10 Watt C02 infra red laser
Dimensions:	12" Wide x 20" High x 38" Long (305 x 510 x 960mm)
Weight:	99 Lbs (45 Kg) (Approx.)

Facility requirements

SIENNA 200	110 - 120 Vac, 50/60 Hz 3 Amp. 1 phase 220 - 240 Vac,50/60 Hz 1.5 Amp. 1 phase
Support	• Full warranty cover, labour and materials • Maintenance contracts available
Optional extras	• Air cleaning system • Fixed beam

Customer support

Spectrum Technologies operates an international support service covering 6 continents. Our commitment is total customer support.

- Worldwide customer support from a dedicated team of Field Service Engineers or by fully trained Service Agents
- Technical helpline operating across the global clock
- Operational training for Production and Technical personnel carried out at installation
- Full technical training available at either customer facility or one of our own sites
- Maintenance contracts are available to keep systems operating at optimum performance
- All SIENNA systems are installed by factory trained Engineers or by fully trained Service Agents

Wire Samples If you would like to see the results of laser wire stripping on your own materials we will be pleased to process samples and return them to you for inspection.

SPECTRUM TECHNOLOGIES

Europe:
Spectrum Technologies Plc
Western Avenue,
Bridgend,
CF31 3RT, United Kingdom
tel: (+44) (0) 1656 655437
fax: (+44) (0) 1656 655920

North America:
Spectrum Technologies USA Inc.
2445 East Southlake Boulevard
Suite 200, Southlake,
TX 76092, USA
tel: (817) 442 9129
fax: (817) 442 9448

Metro Business Park III,
2320 West Peoria Avenue,
Suite C118, Phoenix, AZ 85029, USA
tel: (602) 493 9343
fax: (602) 493 8003

Hong Kong:
Spectrum Technologies Asia-Pacific
Room 1B, 14/F Albion Plaza
2-6 Granville Road, Tsimshatsui
Kowloon, Hong Kong
tel: +852 2270 7205
fax: +852 2125 5371