SPECTRUM TECHNOLOGIES

NOVA™ WIRE MARKER AUTOMATION

HIGH SPEED WIRE MARKING AND PROCESSING SYSTEM ACCESSORIES

AUTOMATION & WIRE HANDLING SYSTEMS AND PERIPHERALS
FOR ENHANCED PRODUCTIVITY

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The Mark of Excellence

Nova 6th Generation Laser Wire Markers

Nova 50-100i and 800i are Spectrum Technologies' 6th generation range of innovative laser wire processing systems providing mark, measure and cut capabilities. A range of optional wire handling automation products are available to enable customised systems to be configured to meet customers' precise requirements. Every subsystem and every component has been carefully designed and specified to maximise performance and reliability. Just add the wire handling and peripheral modules you require to meet your production needs.

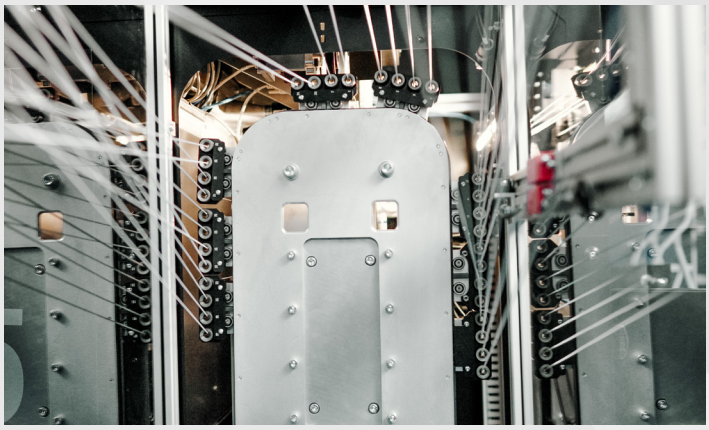
HIGH PERFORMANCE UV LASER WIRE MARKING SYSTEMS

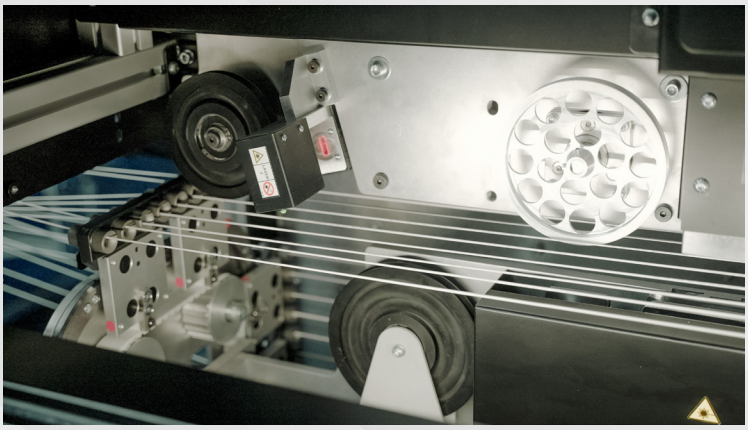
Nova 800i UV laser wire mark, measure and cut systems offer maximum flexibility combined with the very highest laser marking speeds available on the market. Nova 800i laser markers are complemented by Nova 50-100i wire marking systems for lower volume production & MRO applications.

Nova systems are available configured as either a basic manual system with a single dereeler or with automated wire handling options to aid manufacturing and enhance productivity. These include Nova multi-station dereelers for use with both the 800i and 50-100i series, which enable the systems to be handle with up to 36 wires or cables. The Nova 800i series can also be configured with the Nova ASL wire Auto Select and Load system for high speed automatic selection, loading and unloading of wires from the dereeler into the wire marking unit. This capability reduces the complete wire change over and set up times to just a few seconds, maximising productivity.

Above: Nova multi-station dereeler enables a wide range of different wires and cables to be fed into the wire marker ASL auto select and load unit

Wire changeover and set up is fully automated and controlled by the Nova system. The control software allows customers to choose between running jobs in either of the following two modes:





Nova ASL 36 station high speed wire Auto Select and Load unit for use with Nova laser and multistation dereelers

1. In the order listed in the customer's job data file, e.g. processing of all wire and cables required for an individual connector. This enables the fully automatic production of sorted wire bundles, thereby eliminating the need for subsequent manual sorting of wires into connector groups. This methodology along with the use of automated downstream wire handling systems is particularly suited to lean manufacturing.

2. By taking the customer's job data file, grouping all of the wires required for a complete job and running all wires of one type in turn, sequencing the job by wire type. This mode reduces the number of wire changes and set ups but may require wires to be manually sorted and grouped after processing. This is the standard set up for manual systems.

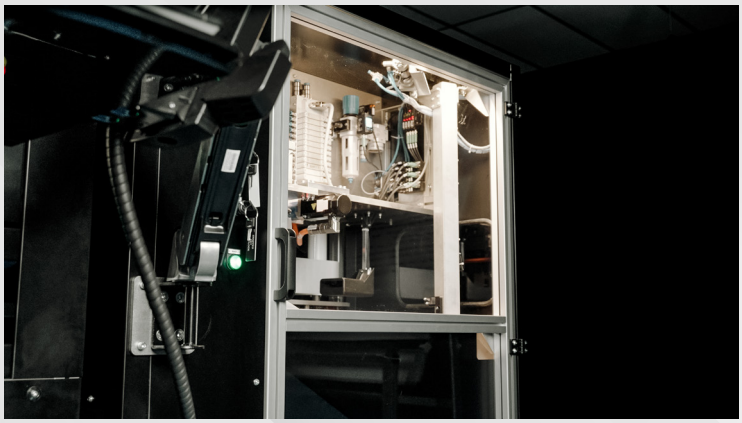
Coil Pans and Rereeler Wire Collection Systems

Coil pans are the standard method of collecting wires and cables after marking, measuring and cutting to length. A coil pan sensor is also available as an option. This passes a light beam across the pan so that as the operator reaches into the pan to remove the processed segment the system will automatically start producing the next segment, thereby minimising delays and maximising productivity. Coil pans are provided as standard on all systems unless downstream automation systems are selected.

above: coil pan with coil pan sensor

Nova Automation Technology

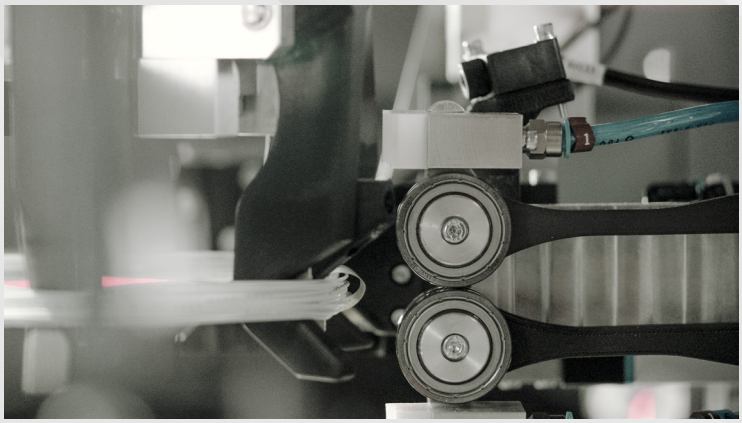
In addition to multi-station dereelers and the wire auto select and load (ASL) system a variety of equipment options are available for configuring fully automated systems. These include automated linear stacker systems and the next generation of Nova Pegasus automated coiling and downstream wire processing systems. Fully automated Nova systems are particularly suited to high volume harness manufacturing situations offering substantial improvements in productivity when compared with manual solutions.



High Speed Wire Marking and Processing System Accessories

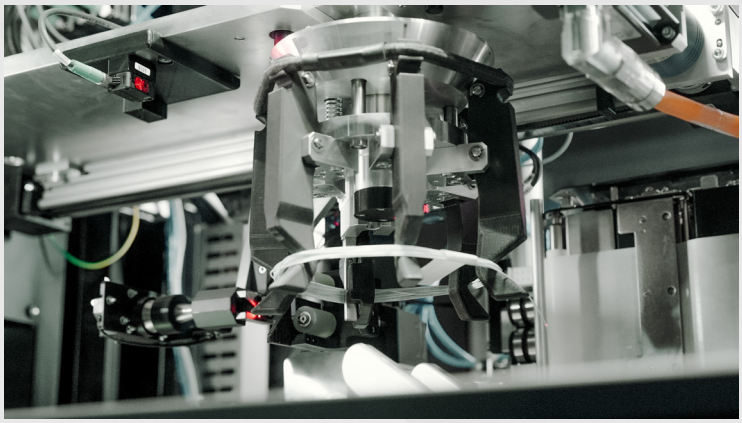
Nova Pegasus downstream automation systems

Nova Pegasus is a ground-breaking high performance downstream automation system that will revolutionise the way you run your electrical wire harnessing production.



The Nova Pegasus downstream automation system is a modular unit designed to integrate with the Nova series wire markers and replaces the coil pan system generally used to collect the wires as they exit the

The integration of the Pegasus unit fully automates the wire marker allowing unattended operation for extended periods and allows wires and cables to be processed rapidly while efficiently sorting them on the system to enable complete connector bundles to be made up automatically, thereby eliminating the need for manual sorting downstream.



The system is modular and configurable with various options providing different levels of automation to enable it to be customised to meet individual customer requirements. Please ask for more details.

Printers and Machine readable coding: Linear barcodes, 2D data matrix codes & readers

Our 6th Generation wire markers can mark both linear bar code and 2D data matrix codes to help speed harness manufacturing. To complement this capability we have also developed two high performance readers dedicated to wire harness applications. Our Linear and 2D Data Matrix readers are optimised for reading codes on small gauge wires. Both can be used in a handheld or hands-free configuration and are portable so can be used anywhere on the shop floor. Get in touch for more information.

Above: Linear barcode and 2D Matrix machine readable codes

Label printers: To further aid manufacturing of w ire harnesses, label printers may be integrated with the Nova systems to automatically generate self adhesive labels w ith printed data, e.g. for tracking and routing purposes, etc. Printed data is selected from customers' downloaded job files as required and may include alphanumeric data as well as machine readable code. Please contact Spectrum Technologies for full information.

Nova Automation

High Speed Wire Marking and Processing System Accessories

Summary Specifications

Nova multi-station dereelers

Nova dereelers provide controlled high speed dereeling to match the capabilities of Nova wire marking systems, they are available in both powered and unpowered options. Nova dereelers meet the need for the high acceleration and deceleration required to maximise through-put and productivity,while limiting the tension applied to small gauge w ires and cables. Nova systems limit the load applied to wires by means of a controlled tension that can be set as low as 1 Newton. This avoids over tensioning and consequent problems of wire deformation or breakage.

Nova dereelers can also be used with Nova Jet™ inkjet wire marking systems and Nova MaX™ cable measure and cut systems.

Features:

- Powered: 1 to 36 stations | Unpowered: 1 to 32 stations
- Heavy duty designs for maximum reliability and availability
- Compact units w ith minimum footprint
- Controlled high speed dereeling up to 150 m/min (500 ft/min)
- Controlled w ire tension dow n to 1 New ton
- Quick release mechanism for fast reel changeover
- 25 mm (0.98 inch) diameter dereelers spindle - adaptors available to accommodate other reel centre hole diameters
- Accommodates reels up to 38 cm (15 inch) diam., 30.5 cm (12inch) width, 20 kg (44 lbs) weight (for heavier reels please consult Spec — trum)
- Powered systems include:
  - Programmable logic controller
  - Interlocked safety enclosures
  - Pow ered frommain laser wire marker unit

Nova ASL - wire Auto Select & Load unit

The Nova ASL is a modular add on unit that can be integrated into the front of the Nova 800i wire marker units to enable high speed wire changes. The ASL is controlled via the Nova system PC, which rotates the selected w ire in to position on demand and loads it in to the mark-ing slot.

Features:

- Innovative rotary wire selector design holds up to 36 wires from the multi-station dereeler
- High speed wire changes minimises set up time
- The total process time for unloading, selecting a new wire, loading the w ire and commencing the processing of the next segment is 6-8 seconds(typical) inclusive of data download and set up

Nova Pegasus Automation Systems

- Automated coiling tying of wires and multi-conductor cables
- 15cm / 6 inch typical coil diameters
- Accommodates wires from 26 AWG to 6 AWG (0.8mm to 6.4mm outside diameter)
- Automatic printing of labels w ith alphanumeric and / or bar code or data matrix codes; content, fields and lay out customisable to customer requirements
- Options for grouping and collecting coils on carousels or in tote boxes; laser stripping of first ends of single core wires and outer jackets of multi-conductor cables
- Waste bin for automated discard of faulty w ires, e.g. with knot and splice, and w ire offcuts.

Label printers and specialised readers for linear bar code and 2D data matrix codes

Please contact Spectrumfor separate details

Operating Conditions (automation accessories)

- Ambient temperature 15°C to 40°C (60°F to 104°F)
- Relative humidity 20% to 80% (non-condensing)

For information on Nova laser wire markers please refer to separate sales brochure

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

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