SPECTRUM TECHNOLOGIES

Nova™ 50-100i

UV Laser Wire Mark, Measure and Cut Systems

The Mark of Excellence

Nova™ 50-100i SERIES

6TH GENERATION UV LASER WIRE MARKING SYSTEM

Designed to meet the growing demands and challenges across industry these machines incorporate a range of leading edge technologies to create a state-of-the-art family of benchtop laser wire processing systems. Providing mark, measure and cut capabilities for applications ranging from low volume manufacturing and maintenance to full scale production.

The new range comprises the **Nova 50-101i, 50-102i** and the **50-103i** models with marking speeds of 12, 18 and 28 metres per minute (40, 60 and 90 ft/minute).
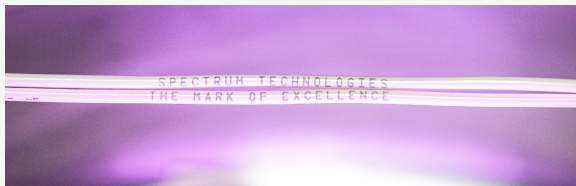
ABOVE:
UV Laser Marked Wire

At its heart the Nova 50-100i incorporates a new laser marking module. This employs a high pulse rate, air-cooled, diode pumped UV solid state laser, coupled with a two axis galvanometric scanning system that directly writes the required characters onto the surface of the wire.

This system offers completely flexible marking, with unlimited character sets, variable font sizes and the ability to mark upper and lower case characters, as well as linear bar code, e.g. BC39, machine readable codes.

Nova 50-100i wire markers comply with all key OEM aerospace specifications and international standards, including SAE AS5649 and ASD EN4650, "Wire and cable marking process, UV laser". Qualified to Boeing standards: BAC 5152, D6-36911. Meets Airbus and other key OEM requirements.

| Capabilities & upgradability

The modular design of the Nova 50-100i series coupled with a choice of wire handling options, enables systems to be configured to meet customers' precise requirements. The modular design ensures that systems can be easily upgraded in the field to ensure that as your business grows, so can your Nova system.

| Cost of ownership

The enhanced cost performance ratios of the Nova 50-100i, resulting from the new high efficiency laser system, combined with the extended maintenance intervals and minimal consumables required, deliver significantly improved total cost of ownership.

| Reliability and ease of maintenance

The Nova 50-100i has been designed for both ease of use and maintenance. Hinged doors and easy access panels provide quick access to all parts of the machine. Alignment of the laser beam to the wire for set up and maintenance is undertaken simply via the PC in Class 1 laser mode. No flash lamps or water filters to change - the new long life diode packs are rated for 20,000 hours operation.

ABOVE:
Single Floor Standing Unpowered Dereeler

	Nova 50-101i	Nova 50-102i	Nova 50-103i
STANDARD FEATURES AND OPTIONS			
Wire loading system - select either	Single table-top unpowered dereeler	Single floor standing unpowered dereeler	Single floor standing unpowered dereeler
	Or: Multi-station dereelers as required. (See Nova Automation Brochure for details)		
Coiling pan – 12 inch/30cm diameter	☑ Unpowered	☑ Powered	☑ Powered
Coiling pan motion sensor actuator	Optional	Optional	Optional
KSD knot & splice detection (digital optical)	Optional	☑	☑
In-line real time wire tension monitor	Optional	Optional	Optional
Traffic light tower	Optional	Optional	Optional
Upper/lower case marking	☑	☑	☑
Linear Bar-Code & 2D matrix marking on wire	Optional	Optional	Optional
Available Field Upgrades			
Nova system upgrade	N50-102i or N50-103i	N50-103i	N/A

Nova 50-100i SERIES ACCESSORIES
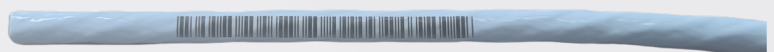

ABOVE:
Zebra Label Printer

Printers and Machine-readable coding: Linear barcodes & readers

Our 6th Generation wire markers can mark linear bar codes to help speed up harness manufacturing. To complement this capability, we also offer a high performance reader dedicated to wire harness applications. The barcode reader is optimised for reading codes on small gauge wires. It can be used in a handheld or hands-free configuration and is portable so it can be used anywhere on the shop floor.

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.

Get in touch to find out more.

BELOW:
Barcode Reader

Label Printers

To further aid manufacturing of wire harnesses, label printers may be integrated with the Nova systems to automatically generate self-adhesive labels with 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.

ABOVE:
Linear Barcode Machine Readable Codes

Nova 50-100i SERIES

Summary Specifications

LASER MARKER

High-efficiency, air-cooled, long-life diode pumped solid state (dpss) UV laser Fully flexible scanning marking system Sealed lasers — no need for specialised laser maintenance engineers/training Simplified maintenance; minimal consumables Reduced total cos of ownership three models to choose from: Nova 50-101i, Nova 50-102i, Nova 50-103i

PRINT SPECIFICATION

Up to 200 characters per identification mark as standard
Full upper and lower case ASCII alphanumeric character set available as standard Machine readable codes **
Custom characters available on request

WIRE PROCESSING SPECIFICATION

Wire size range: 26 AWG to 6 AWG (0.8 mm to 6.4 mm OD)
Min/max cable length: 150mm (6") / 999m (39,300") (nominal)
Accuracy of processed wire and cable lengths:
-0/+0.25% (typical) +0.5% (max)
Measure & cut capability for non-markable wires
Speeds up to 28 m/minute (90 ft/minute)

WIRE HANDLING

Single and multi-station dereeler options
Manual wire loading
Automatic detection of knots, splices and wire ends with optical KSD (Knot and Splice Detector)
Optional on Nova 50-101i **
Single coil pan as standard
Coil pan motion sensor **
Other downstream wire collection options available, including rereeler option for continuous filament processing **

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

WIRE TYPES

Marks all types of UV laser, markable wires and shielded and unshielded multi-conductor cables. Full list available on request.

CONTROL

Windows-based control software
New, intuitive, easy-to-use interface
25.6 cm / 10 inch touchscreen operation standard on all models
Smart wire and cable wastage minimisation routine

OPERATING CONDITIONS

Ambient temperature 15°C to 35°C (60°F to 95°F)
Relative humidity 20% to 80% (non-condensing)

SITE REQUIREMENTS

Electrical power: Universal input 110/230V 50/60Hz
5kVA single phase

DIMENSIONS

762(L) x 772 (W) x 665 (H) mm (30.0 x 30.4 x 26.2 inch)

WEIGHT

91 kg / 200 lbs

STANDARDS & QUALIFICATIONS

Nova 50-100i wire markers comply with the requirements of SAE AS5649 and ASD EN4650 "Wire and Cable Marking Process, UV Laser."
Qualified to Boeing BAC 5152, D6-36911
Meets requirements of Airbus AIPS
The laser marking process has been verified not to cause any impairment to the wire surface or to vary the electrical or mechanical properties of the wire insulation when carried out in accordance with the operating instructions.

** Optional items subject to change

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