SPECTRUM TECHNOLOGIES

Nova™ 50-100i Series

UV Laser Wire Mark, Measure and Cut Systems

EN

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 the N50-100i series incorporates 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

Overview

At its heart the Nova 50-100i series 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 and 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		
Floor Standing LC SSUDR	Optional	☑ Standard	☑ Standard
Tabletop Unpowered Dereeler	☑ Standard	N/A	N/A
Tension Monitor	Optional	Optional	☑ Standard
Knot & Splice Detector (KSD)	Optional*	☑ Standard	☑ Standard
Powered Coil Pan	Optional	☑ Standard	☑ Standard
Coiling Pan Sensor	Optional	Optional	☑ Standard
Signal Tower	Optional	Optional	☑ Standard
Barcode Reader	Optional	Optional	Optional
Zebra Label Printer	Optional	Optional	Optional
US Keyboard	Optional	Optional	Optional

Additional options are available upon request.
*If Knot & Splice Detector is required a Floor Standing LC SSUDR must be purchased with it.

Nova 50-100i Series Accessories

ABOVE:
Zebra Label Printer

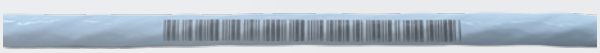
Printers and Machine-readable coding: Linear barcodes & readers

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



ABOVE:
Linear Barcode Machine Readable Codes

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.

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 cost of ownership, three models to choose from: Nova 50-101i, Nova 50-102i, Nova 50-103i.
- Class 1 Laser product for use on the open shop floor.

PRINT SPECIFICATION

- Standard specification: Up to 96 characters per identification.
- Character set: Full upper-case and lower-case alphanumeric (A-Z, 0-9), /%@-&*<>(+).

Standard Print Size:

FONT	Metric (mm)	Imperial (in)	Suitable for AWG (typical)
Large Horizontal	1.60 x 1.20	0.063 x 0.047	16 and larger
Medium Horizontal	1.12 x 0.84	0.044 x 0.033	18, 20, some 22
Medium Vertical	1.20 x 0.90	0.047 x 0.035	22, some 24
Small Vertical	1.20 x 0.60	0.047 x 0.024	24, 26, 28, some 30

WIRE PROCESSING SPECIFICATION

- Wire size range: 26 - 6 AWG (0.8 - 6.35 mm OD)
- Min/max cable length: 6 - 39,300 in / 150 mm - 999 m (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 90 ft/minute / 28 m/minute

WIRE TYPES

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

WIRE HANDLING

- Powered and unpowered dereeler options
- Manual wire loading
- Automatic detection of knots, splices and wire ends with optical Knot and Splice Detector (KSD)
- 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 **

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

- Operating temperature: 15°C to 28°C / 59°F to 82°F.
- Relative humidity: 20% to 80% (non condensing)

SITE REQUIREMENTS

- Supply Voltage: 100 to 240 VAC, Frequency (Hz): 50/60,
- Current rating (A): 5/10, Power supply rating (rms): 1.2 kVA

DIMENSIONS (W x D x H)

- Metric: 1100 × 820 × 850 mm
- Imperial: 43.3 × 32.3 × 33.5 in

WEIGHT

- 95 kg (209 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

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

Scan for more information

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