



Nova™ 50-100i Series



Bench-top UV Laser wire mark, measure & cut systems

SIMPLIFY MANUFACTURING - INCREASE PRODUCTIVITY - REDUCE COSTS

Nova 50-100i Series

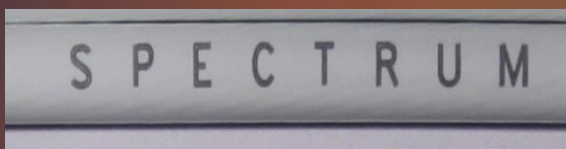
6th generation UV laser wire marking systems

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 laser wire processing systems. Providing mark, measure and cut capabilities for applications ranging from low volume manufacturing and maintenance to full scale production.

The predecessor mask based *CAPRIS* 50-100, introduced in 2003, was the world's first bench top UV laser wire marker. Over 375 of these units have been sold making it the most widely used laser wire marker in the world. The new Nova 50-100i, which replaces it, builds on this legacy with a completely reengineered and fully updated and expanded product range. Three new models provide increased throughput and productivity along with new capabilities in a cost efficient package offering the lowest cost of ownership without compromising on quality.

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).

A key benefit of the Nova 50-100i series is the range of new and enhanced features available either as standard or as options depending on the model. In addition systems may be upgraded in the field to higher specification models, providing flexibility to respond to future changes in demand.



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, and 2D data matrix machine readable codes.



Above: Linear barcode and 2D data Matrix machine readable codes

Optimised fonts ensure maximum mark quality and legibility, delivering "The Mark of Excellence".

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.

Nova 50-100i BENEFITS

- **Mark flexibility and quality** – Nova 50-100i systems offer the ultimate in print flexibility with unlimited character sets, upper and lower case marking, variable font sizes, logos and linear and 2D machine readable code marking.
- **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.

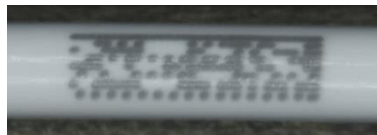
STANDARD FEATURES AND OPTIONS

Wire loading system - select either:	Single table-top unpowered dereeler	Single table-top 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	N50-101i to N50-102i or N50-103i	N50-102i to N50-103i	n/a
Nova Wire Marker Performance			
Nearest CAPRIS predecessor model	CAPRIS® 50-100PCS	Nova 800	Nova 820

Nova 50-100i SERIES ACCESSORIES

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 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' down loaded job files as required and may include alphanumeric data as well as machine readable code. Please contact Spectrum Technologies for full information.

Above: Stingray Linear barcode reader

Nova Pegasus downstream automation system

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

The Nova Pegasus downstream automation (DSA) system is a modular unit designed to integrate with the Nova series laser wire markers including the Nova 50-100i and replaces the coil pan system generally used to collect the wires as they exit the marker. Integrating Nova Pegasus fully automates the wire marker allowing unattended operation for extended periods.

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.



Nova 50-100i Series

Mark-Measure-Cut

Summary specification

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

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 **

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

- 1096 (L) x 762 (W) x 827 (H) mm (43.1 x 24.5 x 32.5 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 charge.



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