



**SPECTRUM  
TECHNOLOGIES**



# **Nova™ 800i Series**

**HIGH PERFORMANCE UV LASER WIRE  
MARKING AND PROCESSING SYSTEM**

**FOR COMPLEX WIRE HARNESS  
MANUFACTURING APPLICATIONS**

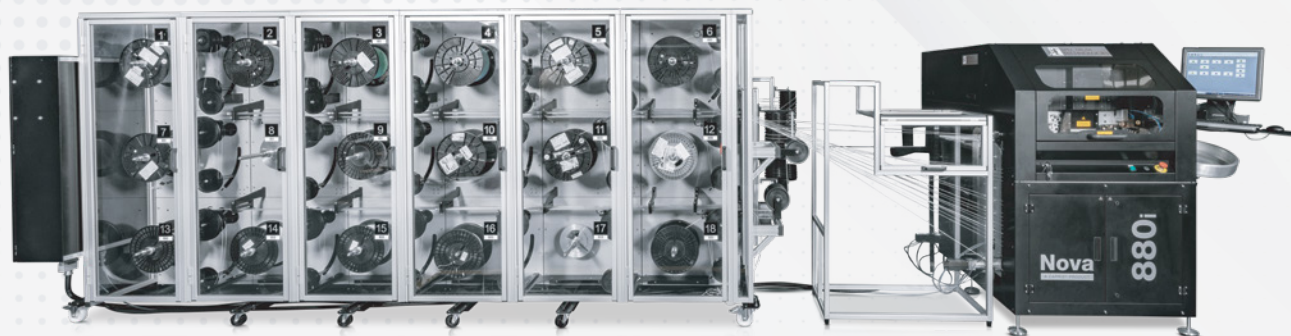
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**The Mark of Excellence™**

# Nova 800i Series

## High Performance, UV Laser Wire Marking and Processing

The Nova 800i Series is Spectrum's 6th Generation UV laser wire marker. Designed to meet the growing demands and challenges across industry by providing innovative solutions to complex wire harness manufacturing applications.



Nova wire markers comply with all key OEM aerospace specifications and international standards, including SAE AS 5649 and ASD EN4650, "Wire and cable marking process, UV laser".

### Mark Flexibility and Quality

Nova 800i systems offer the ultimate in print flexibility with unlimited character sets, upper and lower case marking, variable font sizes and linear machine readable code marking. Performance and productivity – With three models to choose from the Nova 800i systems are the highest performing, solid state UV laser wire markers available.

### Capabilities and Upgradability

The modular design of the 800i wire handling options, enables systems to be configured to meet customers' precise requirements. This includes a range of automation solutions enabling up to 36 different wires to be set up and processed automatically.

### Reliability and Ease of Maintenance

The 800i has been designed for both ease of use and maintenance. The large front door provides improved access to the cable handler for easier loading and unloading of wires, while the up and over side panels provide quick access to the sealed IP4X laser & optical enclosure for maintenance. Alignment of the laser beam to the wire for set up and maintenance is undertaken simply via the PC in Class 1 laser mode.

### Cost of Ownership

The enhanced cost performance ratios of the new 800i, 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.

## Nova 840i

## Nova 860i

## Nova 880i

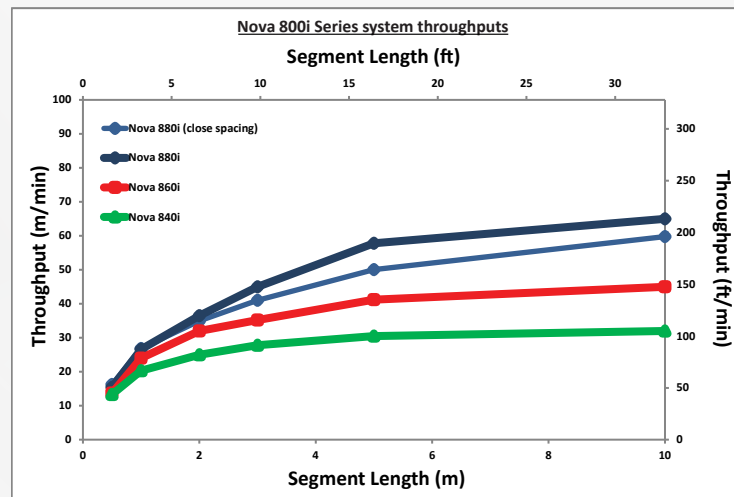
### STANDARD FEATURES AND OPTIONS

	Single unpowered dereeler	Single powered dereeler	Single powered dereeler
<b>Wire loading system - select either</b>	AUTOMATED – includes wire auto select & load (ASL), multi station dereelers available as required		
<b>Coiling pan</b> 12 inch / 30 cm diameter	✓ Standard	✓ Standard	✓ Standard
<b>Coiling pan</b> 15 inch / 38 cm diameter	Optional	Optional	Optional
<b>Coiling pan</b> 7 inch / 18 cm diameter	Optional	Optional	Optional
<b>Coiling pan</b> Motion sensor actuator	Optional	✓ Standard	✓ Standard
<b>Knot &amp; Splice Detection (KSD)</b> (digital optical)	✓ Standard	✓ Standard	✓ Standard
<b>Built in Laser Power Meter</b>	✓ Standard	✓ Standard	✓ Standard
<b>Touch Screen</b> 17 inch / 43 cm	Optional	✓ Standard	✓ Standard
<b>Upper/lower case marking</b>	✓ Standard	✓ Standard	✓ Standard
<b>8kVA Transformer</b> (208/480V to 230V)	Optional	Optional	Optional
<b>Linear Bar-Code marking on wire (BC39)</b>	✓ Standard	✓ Standard	✓ Standard

### AVAILABLE FIELD UPGRADES

<b>Nova system upgrade</b>	Nova 840i to Nova 860i/880i	Nova 860i to 880i	N/A
<b>Manual to Automated wire handling upgrade</b>	Available option		
<b>Throughput and marking speeds</b>	Nova 800i system offer the highest performance and marking speeds available at any level up to the Nova 880i		

### Nova 800i SYSTEM THROUGHPUT AND PRODUCTIVITY



Note: The 840i and 860i have the identical throughputs for both commercial wide spacing and military close coded spacings, whereas the 880i performs at a slightly higher speed for commercial spacings

# Nova 800i Series

## Summary Specifications

### LASER MARKER

- Diode pumped solid state (DPSS) UV laser
- Lowest cost of ownership – efficient high-performance systems; minimal consumables

### PRINT SPECIFICATION

- Up to 200 characters per identification mark as standard, can be optionally extended \*\*
- Full upper and lowercase ASCII alphanumeric character set available as standard in addition to some legacy characters

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 AWG to 6 AWG (0.8 mm to 6.4 mm OD)
- Min/max cable length: 150 mm (6") / 999 m (39,300") (nominal)
- Accuracy of processed wire and cable lengths: -0%/+0.25% (typical) +0.5% (maximum)
- Measure and cut capability for non-markable wires

### WIRE TYPES

- Marks all UV laser markable shielded and unshielded single core wires and jacketed multi-core cables - full list available on request

### WIRE HANDLING

- Unpowered and powered dereelers with controlled pay off and wire tension
- Automatic detection of knots, splices and wire ends with a custom optical, digital Knot and Splice Detector (KSD)
- Single motorised coiling pan as standard, other downstream wire collection options available

### CONTROL

- PC, Windows based control software with Yaskawa PLC
- Touchscreen operation standard on 860i and 880i, optional on 840i
- Smart wire and cable wastage minimisation routine
- Rereeler option for continuous filament processing \*\*

### 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: 5kVA single phase, e.g. 230VAC, 50/60Hz; Spectrum can provide transformer where necessary
- Compressed air: 6 bar (88psi)
- Extraction: 50m<sup>3</sup>/hr (30cfm peak) (25ft<sup>3</sup>/min) or connect to optional ACS4 Air Cleaning System \*\*

### DIMENSIONS (W x D x H)

- Metric: 1430 × 1755 × 1845 mm
- Imperial: 56.3 × 69.1 × 72.6 in

### STANDARDS & QUALIFICATIONS

- SAE AS5649 and ASD EN4650 Wire and Cable Marking Process, UV Laser
- Qualified to Boeing Standard D6-36911
- 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](mailto:sales@spectrumtech.com) or on +44 (0)1656 655 437.



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