SPECTRUM TECHNOLOGIES

Nova™ 800i Series

HIGH PERFORMANCE UV LASER WIRE MARKING AND PROCESSING SYSTEM

FOR COMPLEX WIRE HARNESS MANUFACTURING APPLICATIONS

The Mark of Excellence

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HIGH PERFORMANCE UV LASER WIRE MARKING AND PROCESSING SYSTEM

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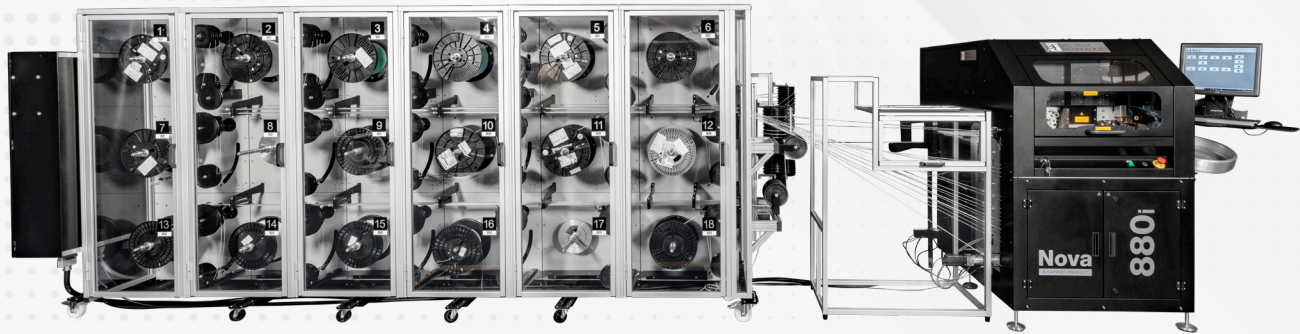
Nova wire markers comply with all key OEM aerospace specifications and international standards, including SAE AS 5649 and ASD EN4650, "Wire and cable marking process, UV laser".

Nova 800i BENEFITS

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 & 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.

CAPRIS® Nova	Nova 840i	Nova 860i	Nova 880i
STANDARD FEATURES AND OPTIONS			
Wire loading system - select either	Single unpowered dereeler	Single powered dereeler	Single powered dereeler
	AUTOMATED – includes wire auto select & load (ASL), multi station dereelers available as required		
In line real time wire tension monitor	Optional	Optional	Optional
Coiling pan – 12 inch/30cm diameter	Standard	Standard	Standard
Coiling pan 15 Inch/38cm diameter	Optional	Optional	Optional
Coiling pan 7 Inch/18cm diameter	Optional	Optional	Optional
Coiling pan Motion Sensor actuator	Optional	Standard	Standard
KSD knot & splice detection (digital optical)	Standard	Standard	Standard
Built in Laser Power Meter	Standard	Standard	Standard
Touch Screen 17 Inch/43cm	Optional	Standard	Standard
Upper/lower case marking	Standard	Standard	Standard
8kVA Transformer (208/480V to 230V)	Optional	Optional	Optional
Linear Bar-Code marking on wire (BC39)	Standard	Standard	Standard
AVAILABLE FIELD UPGRADES			
Nova system upgrade	Nova 840i to Nova 860i/880i	Nova 860i to 880i	N/A
Manual to Automated wire handling upgrade	Available option		
Throughput and marking speeds	Nova 800i system offer the highthest performance and marking speeds available at any level up to the nova 880i		

Nova 800i SYSTEM THROUGHPUT AND PRODUCTIVITY

Nova 800i series system throughputs
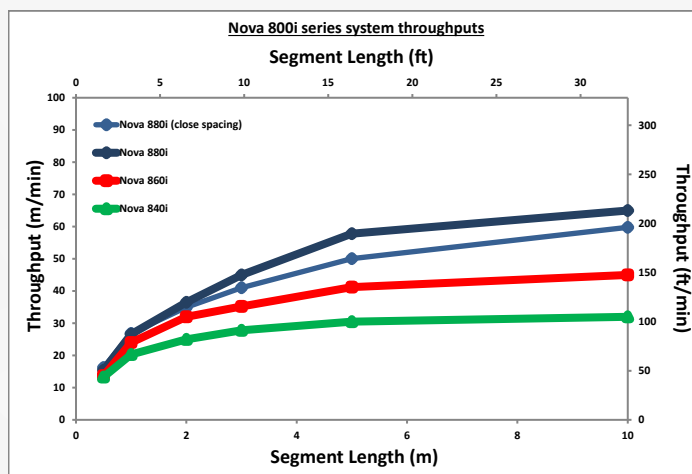
Note : the 840i and 860i have the identical throughputs for both commercial wide spacing and military close coded spacings, whereas the 880i performs at a slightly higher speed for commercial spacings

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 asstandard in addition to some legacy characters:

FONT	Metric (mm)	Imperial (inch)	H/W Ratio	Suitable for wire AWG (typical)
Large Horizontal	1.60 x 1.20	0.063 x 0.047	4 : 3	16 and larger
Medium Horizontal	1.12 x 0.84	0.044 x 0.033	4 : 3	18, 20, some 22
Medium Vertical	1.20 x 0.90	0.047 x 0.035	4 : 3	22, some 24
Small Vertical	1.20 x 0.60	0.047 x 0.024	2 : 1	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

DIMENSIONS

- 1755 (L) x 1430 (W) x 1845 (H) mm – (69.1 x 56.3 x 72.6 ins)

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 KSD (Knot and Splice Detector)
- Single motorised coiling pan as standard, other downstream wire collection options available
- Rereeler option for continuous filament processing **

WIRE TYPES

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

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

OPERATING CONDITIONS

- Ambient temperature 15°C to 35°C (60°F to 95°F) as standard
- 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: 50m³/hr (30cfm peak) (25ft³/min) or connect to optional ACS4 Air Cleaning System **

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 charge

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

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