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# ZERO MEND SYSTEMS

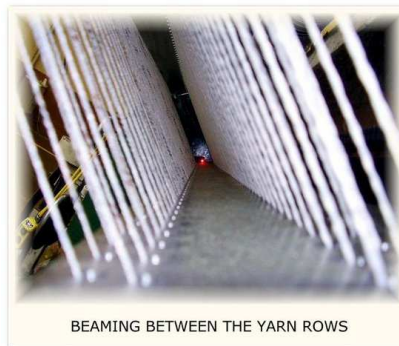
## FEATURES AND BENEFITS

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Corporate Office  
PO Box 20784  
Winston Salem, NC 27120  
Phone: 336-761-1112  
Fax: 336-499-6237  
E-mail: solutions@essexinc.net

Dalton Service Center  
2450 Lakeland Road  
Dalton, GA 30721  
Phone: 706-275-0114  
Fax: 706-275-0151  
E-mail: essexinc@alltel.net

**FEATURES:** The patented "Curtain of Light" is based upon Fiber Optic technology.

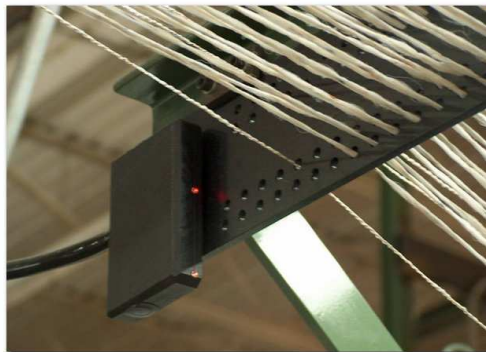


- Modulating optics eliminates optical "crosstalk".
- Maximum Excess Gain Control allows operation in a harsh environment, eliminating problems caused by lint, oil and ambient light.
- Auto Power Control Circuit eliminates light degradation that normally occurs over time.
- Zero Reset Function calculates the light incidence level range between maximum and minimum levels and automatically sets the optimum switching threshold. No guessing and no complicated teaching.
- Monitor Focus Function allows extremely precise sensing required when beaming between yarn rows, by applying the full optical output range to a smaller user-defined, digital range.
- Optical Hysteresis can be adjusted and set to overcome process irregularities such as yarn "flutter", that can cause false readings (false stops).
- Dual Digital Sensing Control Modules allows precise set-up and monitoring of the sensing values using real-time numbers. Provides real-time feedback of the sensing conditions.

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- Function Lock used to protect essential sensing values from personnel interference. Overcomes “operator contamination”.
- Optimal Switching Response Time of 5 microseconds (5/1,000,000 seconds) versus most Infra-red sensors of 5 milliseconds (5/1000 seconds), allowing long distance sensing of small objects moving at high speeds.
- Our New Dimension Tight End Detector is easily adjustable over a wide range of sensitivity options, from coarse to extremely fine. Coupled with its own “Curtain of Light”, tight ends and broken ends do not escape detection.



- The Master Control Unit incorporates a technologically advanced Programmable Linear Control module for extremely fast cease operation signals sent to the tufting machine stop circuit. Also, can be easily adapted for data gathering functions.
- Alarm lights on the Master Control Panel and Tight End Detector allow for easy discovery of the broken / tight end by the operator.
- Each system is Application Engineered for one purpose – Zero Mend Defects.

## **BENEFITS:**

- Advanced quality via elimination of mend defects caused by broken yarn and/or tight ends.
- Since most of the broken yarn ends are captured between the creel header and the tufting machine, machine efficiency is optimized because rethreading of the yarn feed system is minimized.
- Machine downtime is minimized since sensor re-alignment caused by machine vibration is eliminated. Your yarn break / tight end systems are working for you 100% of the time to eliminate mend defects.
- The sensing conditions appear digitally as “real-time” numbers and are easily monitored... and adjusted, if a change of the tufted product so warrants.
- Environmental contamination is eliminated...system never reacts adversely to ambient light conditions.
- Zero Mend Defects is a giant step toward “enduring Tufting Department profitability.”