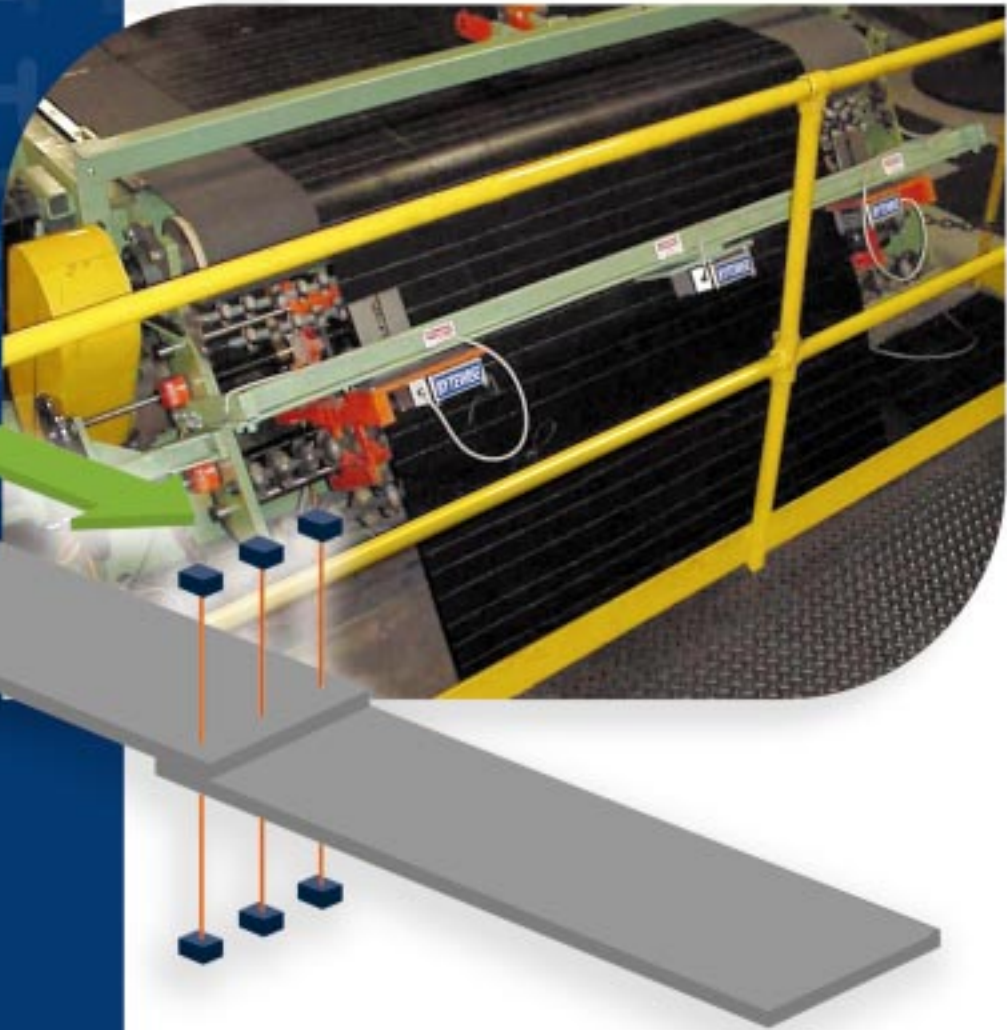


# Splice Width

The **Bytewise In-Line Splice Width Monitor** enables continuous, real-time product and process quality feedback for both automatic and manual fabric ply splicing operations. This effectively minimizes finished tire sidewall bulges and depressions caused by out-of-tolerance splice widths created during material preparation.



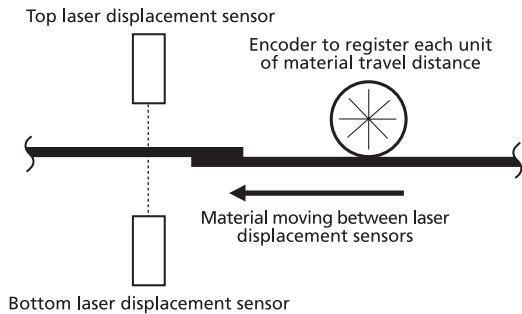
## Features & Benefits

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• High-speed, non-contact laser sensors</li></ul>                                       | <ul style="list-style-type: none"><li>• Enables repeatable detection of leading and trailing splice edges resulting in a more accurate splice width measurement.</li><li>• Enables splice width to be measured without affecting cycle time.</li></ul>   |
| <ul style="list-style-type: none"><li>• In-line configuration</li></ul>   | <ul style="list-style-type: none"><li>• Provides immediate product and process feedback.</li><li>• Provides real-time data output to a PLC for automatic process control in automatic splicing operations.</li><li>• Provides instant feedback to the operator of a manual splicing operation, thereby enabling immediate corrective actions to be made.</li></ul> |
| <ul style="list-style-type: none"><li>• Splice width trend and variation analysis software</li></ul>                          | <ul style="list-style-type: none"><li>• Enables width tolerances to be confidently reduced, thereby eliminating heavy splices and saving material.</li></ul>   |
| <ul style="list-style-type: none"><li>• Multi-channel systems measure at several locations across the product width</li></ul> | <ul style="list-style-type: none"><li>• Improves splice width consistency across the entire product, thereby minimizing open splices and improving tire radial uniformity.</li></ul>   |

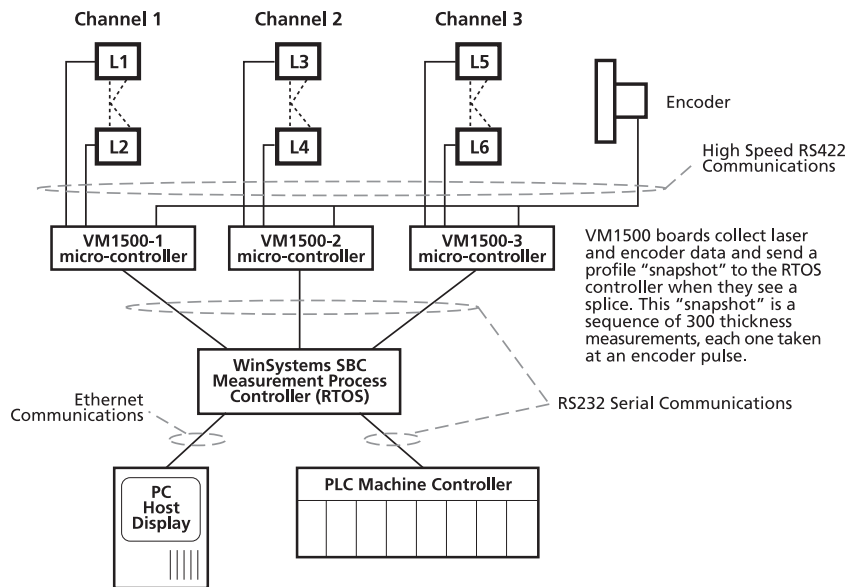
# Splice Width

## Operational Overview

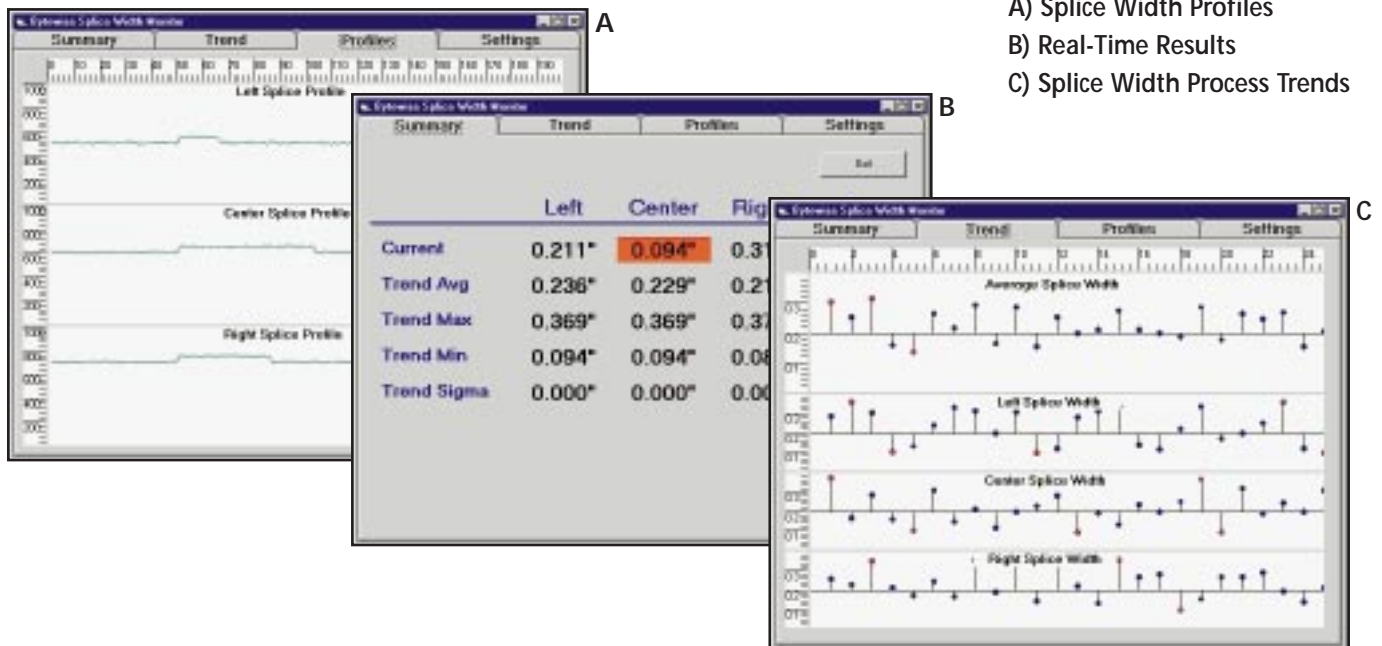
### How It Works



### Data Flow/Processing (3-channel system)



### Real-Time Results & Trends



## Specifications

Encoder Resolution	0.10mm (0.004")
Splice Width Accuracy	+/-0.15mm (0.006")
Splice Width Repeatability (1 Sigma)	0.15mm (0.006")

The above measurement specifications are based on material line speed of 1 meter/second (3 feet/second). A faster laser (32kHz sampling frequency) may be required if line speeds are much greater than 1m/second.