



Precision, Quality, Innovation

## MEASUREMENT SYSTEMS FOR THE TIRE INDUSTRY

### BEAD-TO-BEAD MEASUREMENT SYSTEM (B2B)

Off-Line Profilometer (OFLP)

Off-Line Profilometer SL (PSL)

Off-Line Profilometer 3D (3DP)

On-Line Profilometer (OLP)

Ply, Belt, and Extrusion Feature Tracker (FT)

Profile360 for Apex and Bead Measurement (P360)

Green Tire Uniformity Diagnostic System (GTU)

Green Tire Uniformity Integrated System (GTUint)

Bead-to-Bead Profile Measurement System (B2B)

Bead-to-Bead Tire Scanner (Tire360)

Circumferential Tread Wear System (CTWIST)



LASER MEASUREMENT  SOLUTIONS

# BEAD-TO-BEAD (B2B)

## PROFILE MEASUREMENT SYSTEM

Tire and mold designers are tasked with creating new tire designs that meet strict dimensional requirements when the tire is inflated. The inflated growth is predicted using powerful CAD modeling software. The inflated tire is traditionally measured with hand tools to check compliance to the design target. Checking with hand tools is time consuming, imprecise, and operator dependent.

The Starrett-Bytewise Bead-to-Bead Measurement System (B2B) is a non-contact scanning system that provides instantaneous acquisition for tire profiles from one bead to the other, across both sidewalls and the tread. Data is rendered in a visual display. Drag and drop caliper tools enable easy measurement. The CAD model can be imported into the Bead-to-Bead software so that the actual profile can be overlaid to the design. Data can be exported back to the CAD system for further analysis.

Bead-to-Bead can scan tires rotating at high speed to measure centrifugal growth and deformation.

## FEATURES AND SPECIFICATIONS

- B2B acquires 4,000 or more data points per profile
- B2B acquires complete profiles in less than one second
- Profiles are rendered in a visual display, and matched to a CAD template
- Profiles are analyzed with easy-to-use tools for section width, crown radius, and other parameters
- Data points are output in DXF and TXT formats.

### Specifications

Tire Size Capability	Various configurations to accommodate tire sizes ranging from passenger to truck and bus
Sensor Accuracy	0.15mm (based on standard sensors)
Measurement Accuracy	0.15mm or 0.3mm (*)
Triggering	Keyboard, Encoder, 5~24VDC Digital Input
Point Data Output Formats	DXF, TXT
Communication Interface	Digital and Analog I/O, Ethernet (Modbus TCP), OPC Server
Laser Classification	IIIa IEC 3R

\*Measurement accuracy will depend on whether the data required to complete the desired measurement comes from one or two sensors.

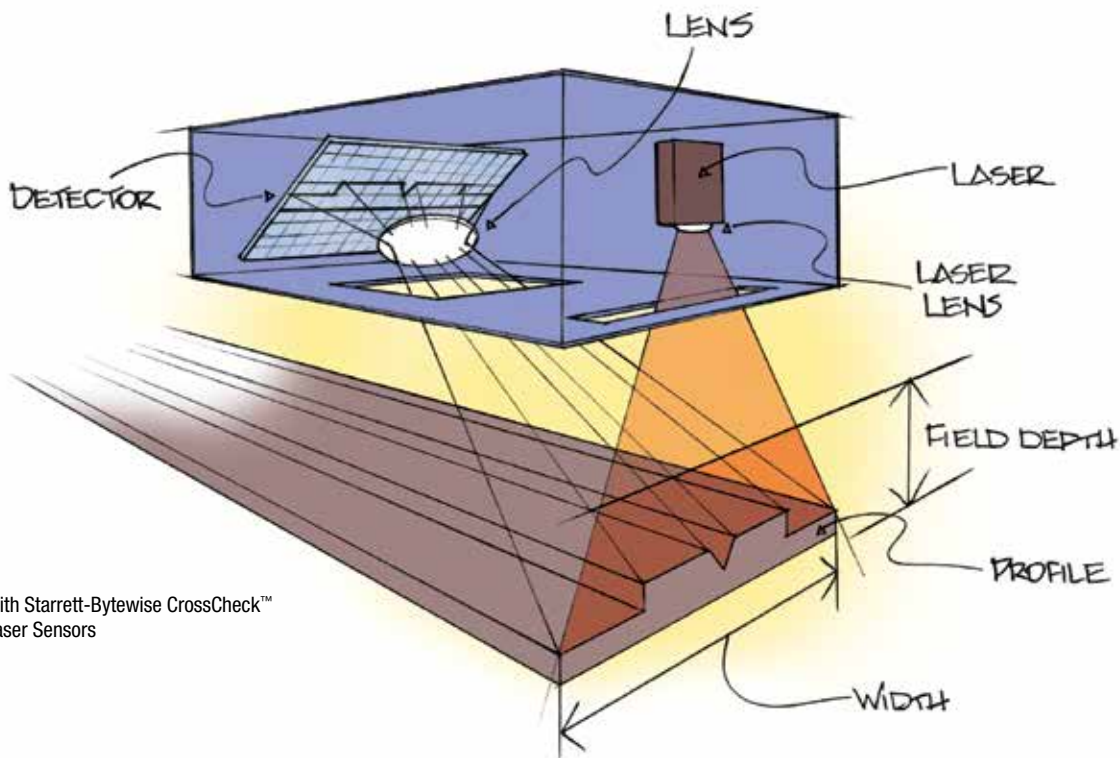


## DISPLAY SOFTWARE



Use calipers to measure profile features such as Section Width, Tread Depth, Shoulder Radius and Crown Height

## MEASUREMENT PRINCIPLE



Built with Starrett-Bytewise CrossCheck™  
Line Laser Sensors



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