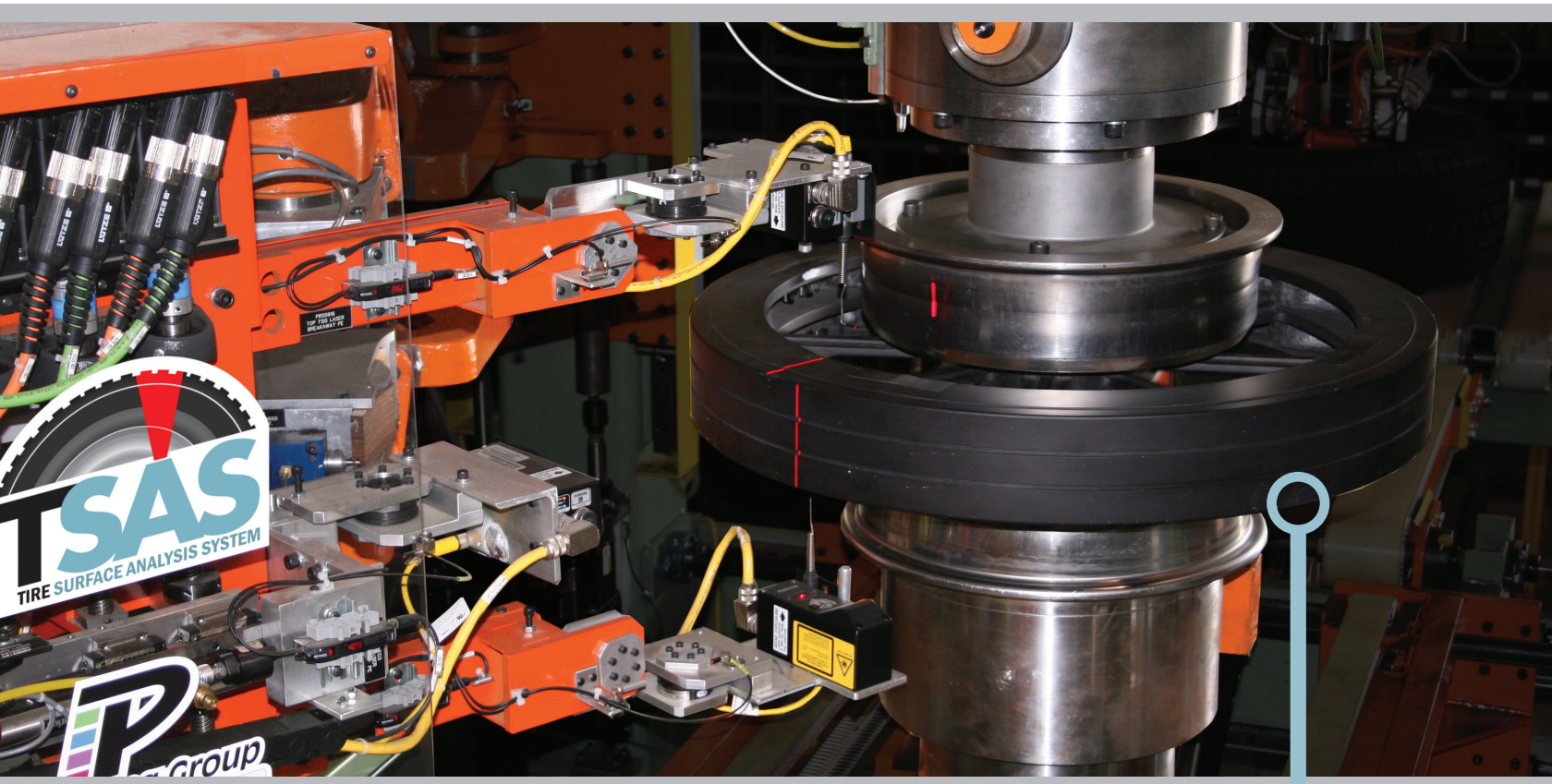
With Our Tire Surface Analysis System, Geometry Testing Has Never Been Smarter!



Features include:

- Automatic detection of test regions (with manual override)
- Store thousands of tire images for later inspection
- Perform a complete geometry set up from a single screen
- Meets all geometry testing requirements of the major tire manufacturers
- Save geometry setup directly to your host. Don't have a host? Check out our Final Finish Host (FFH) solution

We've designed the controller, the software, and the transport to make a seamless and comprehensive surface analysis system

TSAS incorporates our patented Multi-Path Inspection (MPI) algorithm, complex mathematics, and 3D laser profile (a.k.a. 'sheet-of-light' or 'line laser') scanning to locate and accurately measure a tire's geometry, including bulges, depressions, runout, wobble, and other customer-specific measurements.

The TSAS is available as a fully integrated TTOC6 controller option or as a standalone unit for replacement of your inadequate sidewall or RRO System.

The Poling Group's new **Geometry Verification Wheel** provides the quickest way possible to verify your LRO/RRO geometry testing lasers. The verification wheel chucks directly on your testing machine's current rims (up to 20") and, therefore, requires no machine requalifying after verification, since the rims are not removed.

Sidewall (Lateral): Both sidewall faces consist of four bulge/depression plates of varying heights. A ring on the outer 1" has a lateral runout of 0.015".

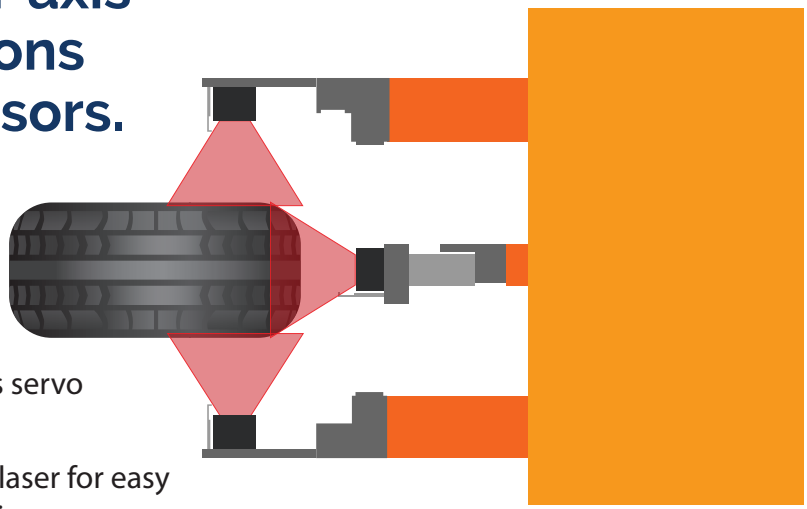
Tread (Radial): Three bands on the "tread" surface of the wheel each have a different radial runout for verification of the RRO laser measurement. An optional insert can be used to measure tread bump/dent (a.k.a. TDIP).

a Poling Group company | +1 330.644.3059 | comtime.com | Sales@comtime.com | 2740 Cory Ave. Akron, OH 44314

C T I

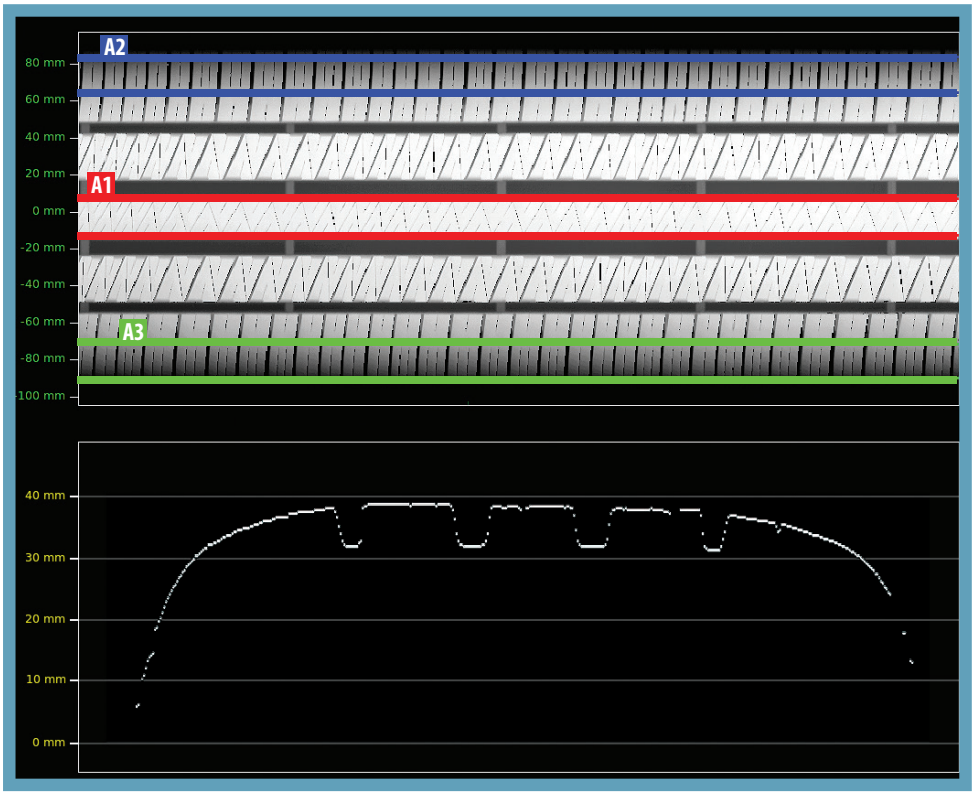
TSAS
TIRE SURFACE ANALYSIS SYSTEM

Our fully-automatic multi-axis transport precisely positions up to three geometry sensors.



- Positions two sidewall and one RRO laser
- Has both collision detection switches and dual-direction breakaways for maximum protection of your high investment lasers
- Uses customer-specified AB/Rockwell or Siemens servo motors and drives for all movement
- Separate 0.5m laser cable for final connection to laser for easy replacement of the most troublesome cable section
- Heavy-duty design fabricated for 20+ years of continuous production

For tread measurement, TSAS is equipped to use a line laser with a large field of view to measure the whole tread surface of a tire in one pass – shoulder to shoulder.

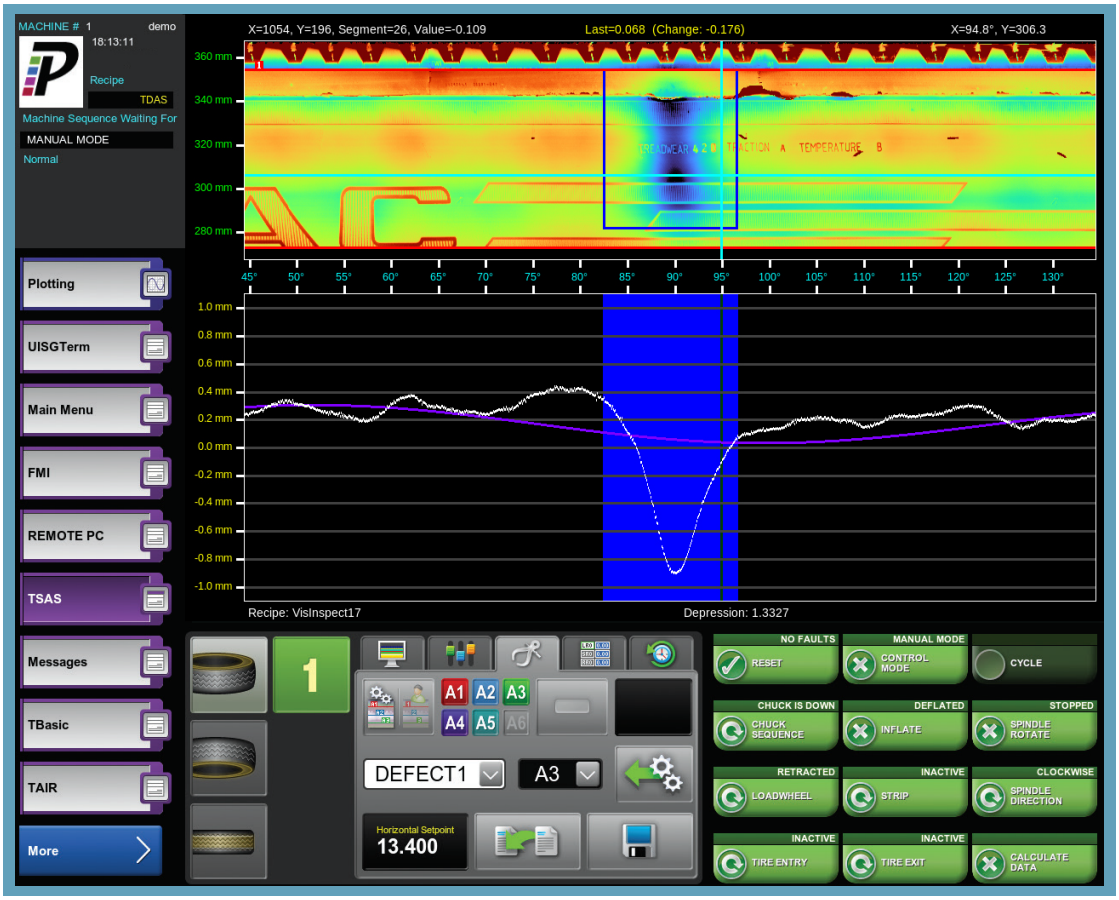


In addition to supporting a variety of 3D laser profile sensors from different manufacturers (e.g. LMI, Bytewise, Wenglor), the TSAS is also available with traditional 'spot lasers' which utilize our patented multi-path inspection software, and are significantly less expensive.

Measure up to 32 harmonics for top, bottom, and center RRO in a single pass, saving cycle time and energy. When coupled with the Poling Group's grinding option, TSAS feeds geometry data directly to the grinders for precise grinding of the tread, covering both the center and shoulder regions.

After grind, TSAS results can be used to determine how much material was removed in the process.

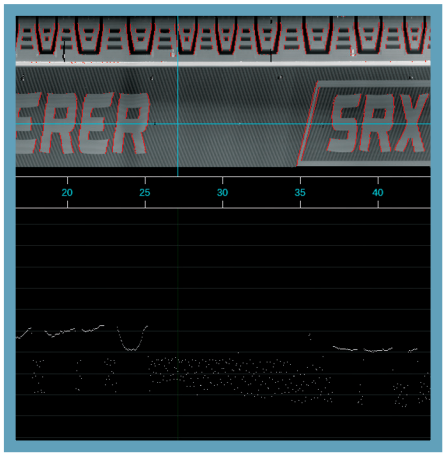
a Poling Group company +1 330.644.3059 comtime.com Sales@comtime.com 2740 Cory Ave. Akron, OH 44314



Custom UI specially designed to enhance our powerful software

Our feature-rich toolset provides the ability to inspect and measure any region of the tire directly at the machine. Back in the office, analyze saved tire images using our Windows application to further enhance recipe setup and provide feedback to the tire-building process.

We're constantly improving this toolset to meet the changing demands of geometry testing. We also provide new features and custom tools upon request.



TSAS software features Automatic 'Letter Elimination'

TSAS detects and ignores lettering and artwork on a tire's sidewall, which drastically reduces false-positive test results (Alpha-misses) and increases throughput.

This feature, along with the many other features in our TSAS algorithm, allows our customers the most flexibility, by recipe, for testing all tire designs.

Learn more today by contacting a qualified representative of CTI, a Poling Group company.

+1 330.644.3059 www.comtime.com Sales@comtime.com