Triton™ Triple-Axis Scanning Laser Micrometers

Triple-axis (also called triple-plane) models make measurements from three viewpoints. The three axes of measurement are coplanar and separated by 60 degrees from each other. The product to measure is perpendicular to the measurement field. (See the associated image.) Typically, the micrometer is used to measure product diameter, ovality, and position. To see illustrations and explanations of these and other common measurement types available with Triton™ triple-axis scanning laser micrometers, visit the Measurements page.

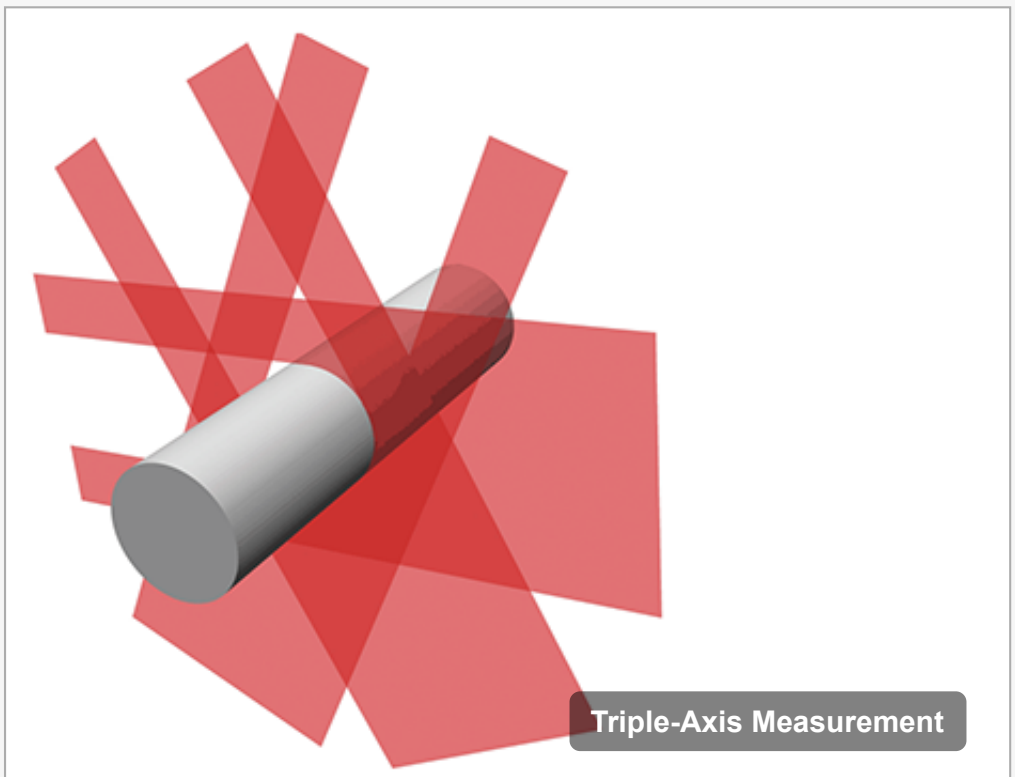
For round products, three axes of inspection offer the best average diameter and an accurate measure of **ovality, also called roundness or eccentricity**.

If the ovality of your product must meet a defined specification, then a LaserLinc Triton-series micrometer is the product you require. LaserLinc's Triton technology provides an accurate measure of ovality *regardless of product orientation*. (See accompanying graph to the right.)

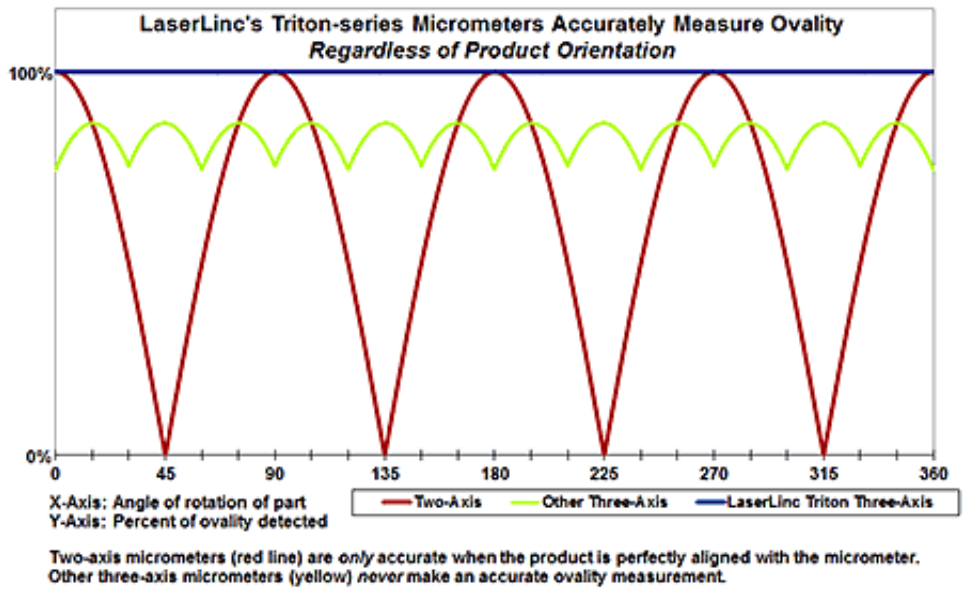
If checking for defects, a Triton micrometer is especially effective at identifying small defects that do not encircle the product.

A common application for Triton micrometers is measurement of medical tubing, especially catheters.

For benchtop applications, a Triton micrometer is perfect for inspecting the product without rotating it, saving time without sacrificing accuracy.



Triple-Axis Measurement



Resources

Dual-axis micrometers

Single-axis micrometers

Micrometer interfaces

Operating principle

Accessories including roller guides, stands, calibration kits, window guards, and air purges

Product safety standards (e.g. CE, UL)

Model Overview

The Triton312 and Triton330 micrometers offer the advantages of three-axis measurement in a very compact package with exceptional accuracy. The Triton331™ and Triton360™ models add a fast measurement rate and with the 360, up to a two inch [50.8 mm] measurement range. For in-process measurement of non-round profiles, products with varying diameter, and flaw detection applications, the latter models can be upgraded to the fastest measurement rates of any scanning laser micrometer: 4,000 Hz per axis (12,000 Hz aggregate). For discrete part measurement, a higher measurement rate facilitates faster inspection cycle times.

Triple-axis models share the following characteristics:

- Measure any material, even clear and translucent products (**glass logic** is a software option included at no charge with *all* systems)
- Use in-process or for benchtop/offline applications
- Measurement accuracy and micrometer operation are unaffected by line speed
- Mount in any orientation
- Multiple mounting surfaces with precision locating holes for flexible mounting, but also for flexible attachment of accessories
- Choose from four different models
- Can be used with the Total Vu™ HMI for complete product and process monitoring, reporting, and control
- Can be used with a SmartLinc™ processor for an intelligent interface via industrial communication protocols
- Available with Ethernet-based NetLinc™ signal interface
- Mounting adapters are available to deploy effective six-axis measurement for superior flaw detection and average diameter accuracy

Four-Year Warranty!

The robust design of LaserLinc laser micrometers ensures reliable operation in harsh manufacturing environments. All are covered by an industry-leading FOUR-YEAR warranty that covers all parts and labor. For warranty details, including LaserLinc's "spare-in-the-air" replacement offer, visit the Warranty and Service page.

Notable applications include:

- Extruded products such as insulated wire, cable, hose, pipe, and tubing
- Average diameter and ovality of synthetic cork for wine bottles

- Taper tube / Bump tube
- Flaw detection

The matrix below shows triple-axis models by measurement range and measurement rate. Triton model numbers begin with ***3*** (the number of axes of measurement), followed by the approximate gate size (in millimeters).

Click on a model number in the Model column to access its specifications and drawings.

	Inches		Metric (mm)		Measurement Rate (Hz)[1]	
Model	Minimum Part Size	Maximum Part Size	Minimum Part Size	Maximum Part Size	Standard	Options
Triton312™	.004	.45	.102	11.4	600 / 1800	
Triton330™	.004	1.15	.102	29.2	300 / 900	
Triton331™	.01	1.07	.254	27.2	1,600 / 4,800	4,000 / 12,000
Triton360™	.016	2.07	.406	52.6	1,600 / 4,800	4,000 / 12,000

[1]Measurement rate is the number of times per second each measurement field (or axis) is scanned. The number after the slash is the aggregate measurement rate for all three axes.

laserlinc
777 Zapata Dr, Fairborn OH 45324
Phone: +1 937.318.2440
Toll-Free: +1 888.707.4852
Fax: +1 937.318.2445
info@laserlinc.com

Specifications & dimensions subject to change.