Finally, A Better Choice

Triton™
THREE-AXIS MICROMETERS

Laserlinc Adds A New Dimension To Your Product Inspection

laserlinc

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LaserLinc, Inc. is owned and operated in the U.S.A.; all products are manufactured in the U.S.A.

PRODUCT INSPECTION MOVES INTO A NEW DIMENSION

LaserLinc introduced the first Triton™ three-axis micrometers in 2006—when the Triton312™ and Triton330™, brought an entirely new dimension to your product measurement and inspection.

The Triton series of micrometers—Triton312, Triton330, Triton331™, and Triton360™—are THE most precise solution for inspecting the outer diameter and ovality of products such as catheters, insulated wire, and glass rods—as well as measuring the outer diameter and ovality of all types of machined parts, including centerless ground parts. Compared to two axis micrometers, the Triton series of micrometers provides a more precise average OD and better flaw detection capabilities.

Three-Axis Ovality Measurement Measuring the ovality—also called eccentricity—of nearly round and elliptically shaped products with a dual-axis micrometer is prone to error (see graph on opposite page). By combining three simultaneous diameter measurements spaced equally over 120 degrees, Triton micrometers provide near-perfect measurements of ovality on elliptically-shaped products, regardless of the angle at which they are oriented.

Accuracy How much more accurate is a three-axis micrometer? The degree of improvement over a two-axis micrometer depends on how out of round the product is. The standard deviation of the diameter measurements from a three-axis micrometer can be as much as 100 times better than the reported average diameters from a two-axis micrometer.

As for hard-to-find flaws that don't encircle the product, a LaserLinc three-axis scanner is more than twice as likely to detect such flaws as a two-axis micrometer. The drawings on the right show some of the flaws that a Triton can detect.

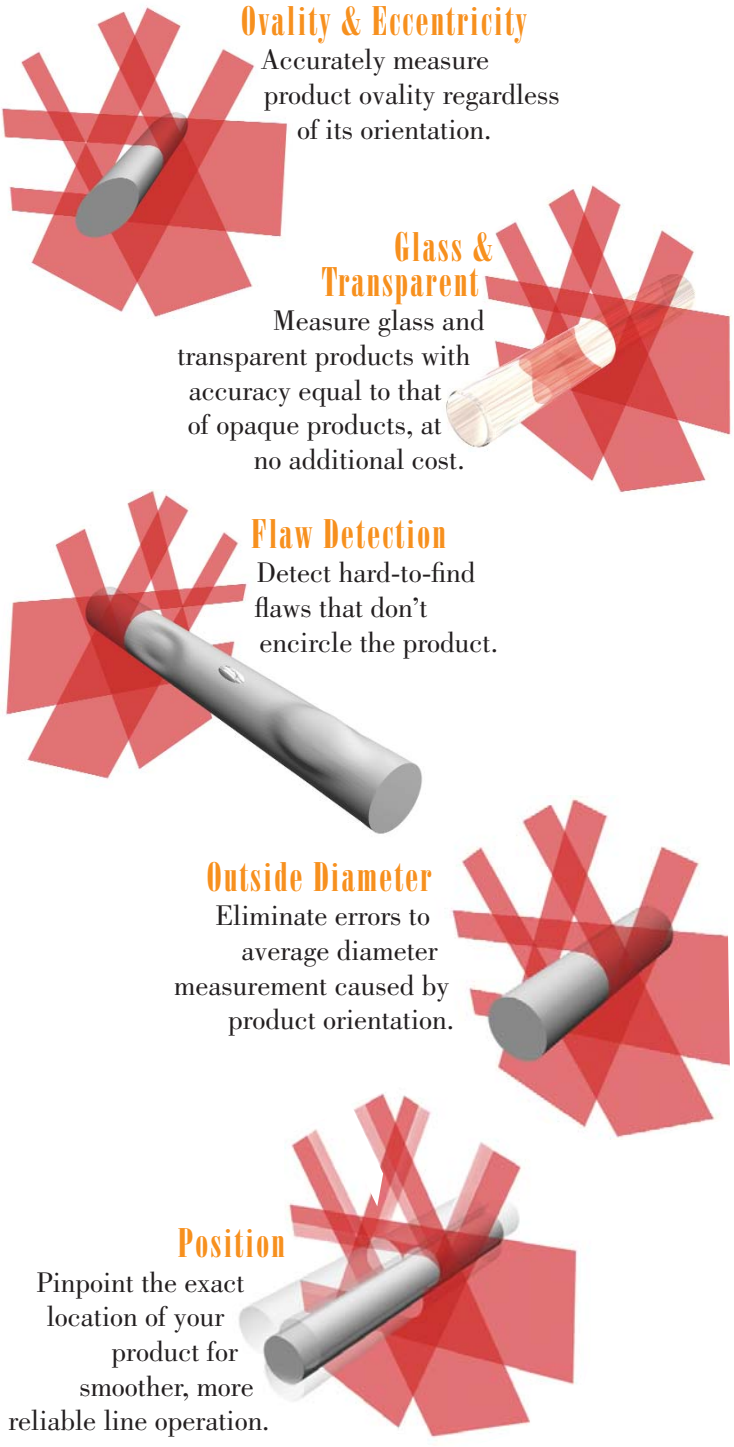
Lobing Detection Attention centerless grinders! Lobex™ Lobing Detection System is a real-time tool for detection and elimination of lobing problems. That's right, with Lobex you can detect lobing **as it occurs**. Combine a high-speed Triton with LaserLinc's special lobing software package.

Which Triton? It's all about you and your application. With measurement rates from 900 to 12,000 per second, and fields of view from .0035" and up, there's a Triton micrometer for just about any application. Call LaserLinc and speak with our application experts to decide which Triton micrometer will be most advantageous for you specific needs.

The Triton micrometers are an essential addition to any process that relies on accurate diameter and ovality measurements. Still not sure? Try one out! With LaserLinc's unconditional 30-day return policy, you have nothing to lose. Call or e-mail us today.

TRITON MICROMETERS ARE IDEAL FOR:

- More precise OD measurement.
- Accurate ovality & eccentricity measurement.
- Flaw detection.
- Measurement of transparent material.
- Quantifying lobing in centerless ground parts.



Ovality & Eccentricity

Accurately measure product ovality regardless of its orientation.

Glass & Transparent

Measure glass and transparent products with accuracy equal to that of opaque products, at no additional cost.

Flaw Detection

Detect hard-to-find flaws that don't encircle the product.

Outside Diameter

Eliminate errors to average diameter measurement caused by product orientation.

Position

Pinpoint the exact location of your product for smoother, more reliable line operation.

TOTAL VU™ SOFTWARE AND THREE-AXIS TRITON MICROMETERS . . . THE TOOLS YOU NEED FOR THE PRODUCTS YOU MAKE

LaserLinc micrometers operate via the TLAser400™ micrometer interface card and a standard PC running Total Vu™ software—LaserLinc's acclaimed measurement and data processing package.

LaserLinc's ability to access the processing power of a PC enables real-time feedback, with in-process tolerance checking, trending, SPC, process control, data logging, recipes, defect detection, and other features. These tools reduce scrap, increase production efficiency, and improve quality—tools that no company can do without.

Increased production efficiency = increased profits. And *that*—production efficiency—is what defines LaserLinc, Triton micrometers, and Total Vu software.

With a Total Vu system, you can monitor the process variables you want, record the information in an electronic format and as hard-copy reports, and control selected process parameters automatically. Use analog input, serial input, or OPC to track variables such as temperatures, pressures, RPMs, speeds, and loads. And, with the Attributes feature, operators can enter a variety of additional information about the order, product, or process.

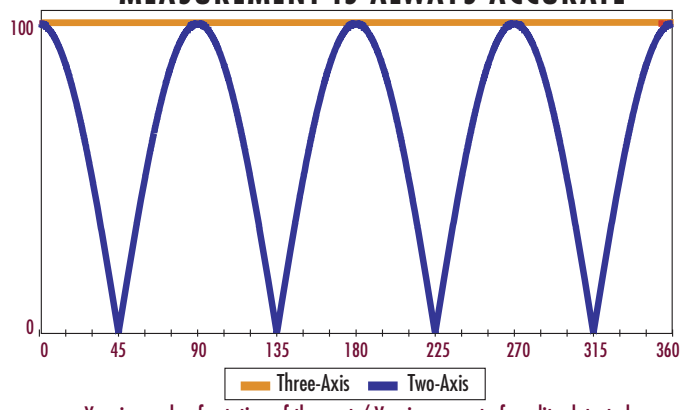
This real-time feedback enables operators to start the line faster, and to run product toward the smaller side of the spec limits, thereby saving material (and money). With feedback control, the system can automatically optimize material usage. Because all of the data can be recorded electronically, your engineers can perform sophisticated post-run analyses to find ways to improve the process, and you will have reproducible documentation to satisfy customers and management.

One thing that Total Vu won't show you is hype or a bait-and-switch of impressive numbers that become less impressive once the equipment is installed on your line. And we back this claim with 30-day, money-back guarantee, an industry leading 4-year warranty on everything except ultrasonic transducers, and lifetime support, which includes TotalLinc, our remote desktop interface that allows our support staff to pinpoint and resolve issues.

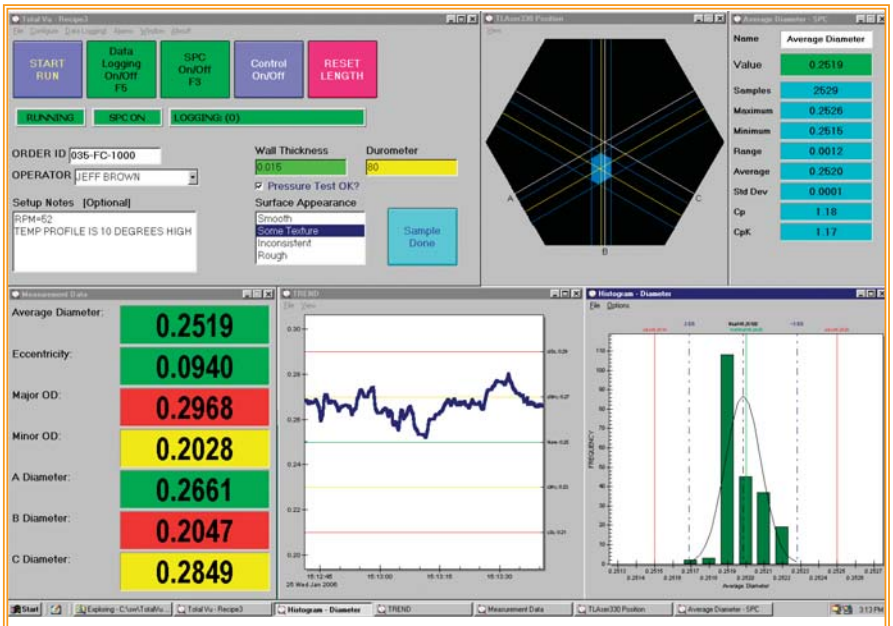
But the fastest way to appreciate the potential power and profitability of using Total Vu is to watch the PC screen and follow the performance of an entire production process in real-time, with user-friendly and easy-to-understand graphic displays. For any quality-conscious, profit-minded observer, it's an exciting show. It also signals where your business and your industry is headed in terms of system-wide (as well as enterprise-wide) production monitoring, cost control, and information flow.

For the past 15 years, LaserLinc has outfitted companies like yours with the tools they need to meet today's competitive challenges. Let us show how LaserLinc can address your measurement and quality needs. For more details about LaserLinc's full offering of products, please see our website at www.laserlinc.com.

LASERLINC'S THREE-AXIS OVALITY MEASUREMENT IS ALWAYS ACCURATE



LaserLinc's three-axis scanning (orange line at top) accurately measures the ovality of your product regardless of its orientation. Two-axis scanning (blue line) is accurate only when the product is perfectly oriented to the scanning axes.



Detail of a PC screen showing a Triton setup in Total Vu software. Clockwise from top: Main window, with buttons and Attributes configured, triple-axis Position Display window, SPC Data Display window, Measurement Display window, Trend chart, and Histogram.

TRITON MICROMETER SPECIFICATIONS

	Triton312	Triton330	Triton331	Triton360
Measurement Range	.004"–.40" (.1mm–10.16mm)	.004"–1" (.1mm–25.4mm)	.010" – 1.18" (.25mm – 30mm)	.016"–2" (.4mm–51mm)
Maximum Measurement Size	.47" (12mm)	1.18" (30mm)	1.18" (30mm)	2.36" (60mm)
Measurements per second	1,800 (600 per axis)	900 (300 per axis)	4,800 standard/ 12,000 optional (1,600/4,000 per axis)	4,800 standard/ 12,000 optional (1,600/4,000 per axis)
Resolution	.000001" (.025µm)	.000001" (.025µm)	.000001" (.025µm)	.000001" (.025µm)
Repeatability Single Scan Two Second	±.0001" (±2.5mm) ±.000005" (±1.25µm)	±.0001" (± 2.5mm) ±.000005" (±.125µm)	±.002" (±.05mm) ±.00001" (±.25µm)	±.004" (± .1mm) ± .00003" (± .762µm)
Positional Error	±.00009" (±2.286µm) within center .4" (10.16mm)	±.00009" (±2.286µm) within center 1" (25.4mm)	±0.0001" (±2.5µm) within center 1" (25.4mm)	±.0002" (±5µm) within center 2" (51mm)
Approx. Dimensions (H x W x D)	9.75" x 10" x 1.25" (248mm x 254mm x 32mm)	9.75" x 10" x 1.25" (248mm x 254mm x 32mm)	13"H x 16"W x 2"D (335mm x 409mm x 51mm)	21" x 21" x 2" (533mm x 533mm x 51mm)
Weight	8.5 lbs(4 kg)	8.5 lbs(4 kg)	22lbs (10kg)	41 lbs(18.6 kg)
Mounting Faces	4	4	3	2

Power requirements: Triton312 and Triton330: +12VDC 200mA, +5VDC 150mA, -5VDC 150mA, from computer; Triton331 and Triton360: 100-240 VAC 50/60 Hz 50 W max.

Triton312 and Triton330 run one per TLAser400 card, with up to four cards/micrometers per computer. Triton331 and Triton360 run four per card, with up to sixteen on a PC using four cards.

Laser Class II visible red laser diode wavelength 675nm.

Lobex system, shown here with a Triton331.

For powerful flaw detection, a dual-mount stand gives you six axes set 30 degrees apart.

The Profile Vu™ oscillating micrometer fixture (shown here front and back, with two Triton312 micrometers) provides optimal product inspection.The Profile Vu oscillates up to 180 degrees to allow continuous inspection. This fixture is ideal for use in finding width and thickness of non-circular products, such as flat wire, and for locating thick and thin sections of extruded material and other die-formed products.

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