

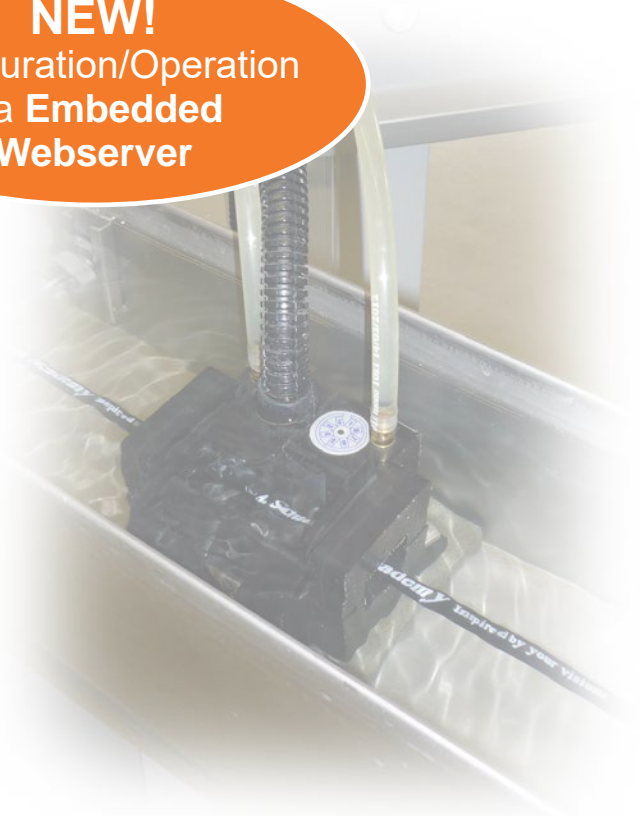
TRUEWALL



Setting the New Standard
in Wall and Concentricity
Measurement Performance

NEW!
Configuration/Operation
via **Embedded
Webserver**

- Increase production efficiencies and reduce material costs by better controlling product wall thickness and concentricity
- Produce the highest quality products in less time with maximum precision, multi-point measurements
- Eliminate operator error with advanced “Snap Technology” automatic set-up, search and tracking capabilities
- The most versatile Ethernet connectivity, communication and control capabilities for easy integration into production networks
- Maximize productivity with simple-to-operate system



Unmatched Performance Advantages

The BETA LaserMike UltraScan system is already the industry's leading ultrasonic wall thickness and concentricity measurement platform. Its high performance and outstanding productivity features (e.g., Snap Technology, multi-layer wall measurement capability and diameter-ovality measurement options) make it the preferred solution for manufacturers. Now with the new TrueWall, the best is even better – and primed for Industry 4.0!

A major step forward in DSP technology, the TrueWall offers unprecedented new levels of connectivity, communication and control in one sleekly designed enclosure. Its powerful capabilities enable the TrueWall to integrate seamlessly into production network environments to promote better data exchange...tighten manufacturing operations... increase process efficiency...and improve product quality. Here are just a few of TrueWall's many performance capabilities:

- **Expanded Ethernet connectivity** – ModBus TCP, EtherNet/IP, Profinet IO – plus fieldbus for Profibus and DeviceNet. TrueWall connectivity supports Industry 4.0 standards and includes the foundation for future wireless connection via WIFI, BlueTooth or ZigBee.



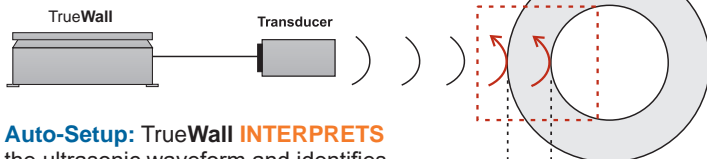
- **Built-in Web server** that allows PCs, tablets, or mobile devices to connect to TrueWall via Ethernet and Web browser (to change settings, view diagnostics, analyze wave forms, etc.). This eliminates the need for a PC-based control application or separate controller, enhancing TrueWall's ease of use and lowering its total cost of ownership.
- **UDP Discovery Application** providing fast gauge discovery and Ethernet connection for reduced system start-up time and increased productivity.

- **Multiple simultaneous host connections**, through Ethernet TCP proprietary protocol, that permits various types of host equipment (PLCs, controllers) to connect to and communicate with the TrueWall concurrently.
- **Measurement rates** are more than double those of similar gauges – up to 10,000 measurements per second. Extended baud rates ranging from 4.8 kbaud to 230 kbaud for greater data throughput, faster processing and measurement rates and improved production performance.
- **Real-time clock** for keeping TrueWall in synch with the NTP server and other equipment for accurate, reliable time-stamping, correlation of log files and other production-critical data. Data synching capabilities support the Industry 4.0 “smart information” concept.
- **User-friendly integrated display** allows users to quickly and easily check various gauge statuses and settings.

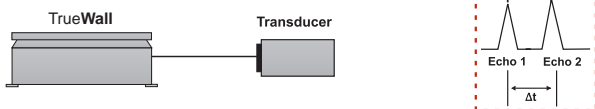
TrueWall's Patented Snap Technology

All ultrasonic measurement systems require setup of the ultrasonic waveform. But while other systems require extensive user involvement during this process, TrueWall's patented Snap Technology, with its Auto-Search, Auto-Setup, and Auto-Tracking functions, makes waveform setup instantaneous and completely automatic.

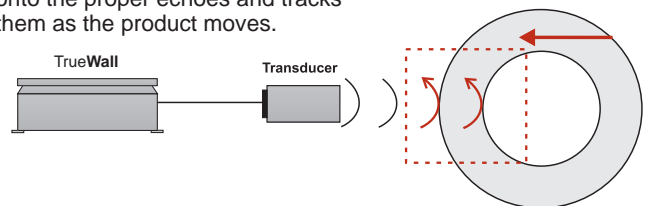
Auto-Search: TrueWall **FINDS** the echoes and sets a “window” around them.



Auto-Setup: TrueWall **INTERPRETS** the ultrasonic waveform and identifies the proper echoes.



Auto-Tracking: TrueWall **LOCKS** onto the proper echoes and tracks them as the product moves.

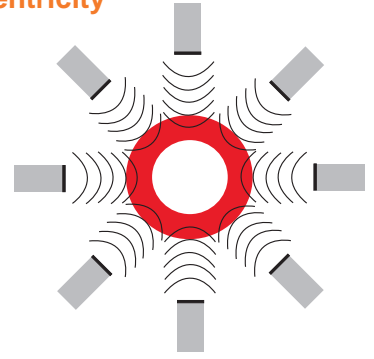


Most Advanced Solution for Multi-Layers and Thin Walls

TrueWall with its DSP Pro intelligence module delivers unmatched performance and repeatable measurement accuracy for the most difficult product applications. With advanced measurement sensitivity, TrueWall offers the most subtle discrimination of multiple layers compared to any other gauging system on the market today – **up to 4 layers**. A thin-wall algorithm enables you to even measure the smallest of wall thicknesses across a range of transducer frequencies.

Multi-Point Wall & Concentricity

TrueWall surrounds the product with four to eight adjustable transducers. This enables TrueWall to fully evaluate the product at all critical locations for fast, accurate measurement of wall thickness and concentricity.

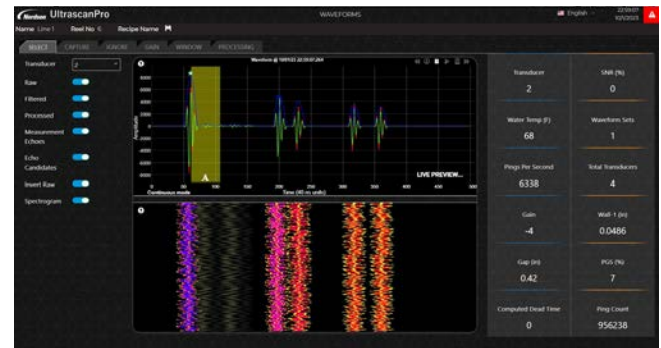
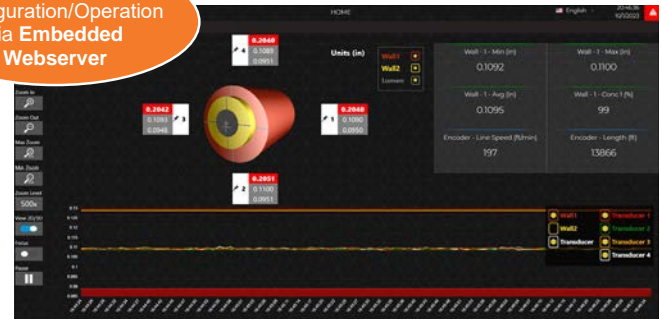


NEW! Embedded Webserver

TrueWall's new webserver provides setup and configuration of the system, displays centering, wall thickness, eccentricity, and diameter. This provides all the functionality a line operator needs for quick setup and monitoring of the manufacturing process. An additional benefit is it comes without the need for extra, costly hardware. Integration of external OD measurements, line speed, and other digital inputs/outputs create powerful capabilities.

The result is the ability to set and control the quality of product, minimize cost, and integrate the system easily with production instrumentation and equipment. Echo waveforms also can be monitored, and settings optimized for successful measurements on the most difficult to measure products. Recipe, settings configuration, and internal diagnostics capability ensure commissioning and startup of equipment is quick and easy. The WebServer eliminates the need for a PC-based control application or separate controller, enhancing TrueWall's ease of use and lowering its total cost of ownership.

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For optimum resolution, the recommended monitor sizes are: 20 inch (1600 x 900 display) in landscape mode or 19 inch (1280 x 1024 display).

Advanced TrueWall Options

High-Speed Tolerance Checking

Ultrasonic systems are often implemented in extrusion lines to monitor for and correct gradual changes in the wall thickness. Short-term variations in wall thickness are often missed when the ultrasonic system is averaging data and monitoring for periodic changes. But the TrueWall system is capable of taking approximately 10,000 wall measurements per second, dependent on thickness, and has an advanced feature for **High-Speed Tolerance Checking**.

The TrueWall checks each scan of each transducer and compares the measurement against wall tolerances. This

high-speed checking of tolerances is designed to catch short-term wall variation on each individual layer of the product.

Once a high-speed tolerance error is found, the TrueWall sends a signal to the InControl controller to indicate that an error has occurred. InControl can then send a signal to a device downstream that will mark or cut out the area of the product that is out-of-tolerance. A length delay is implemented by InControl after the error message is received, so that the mark or cut matches with the position of the error.

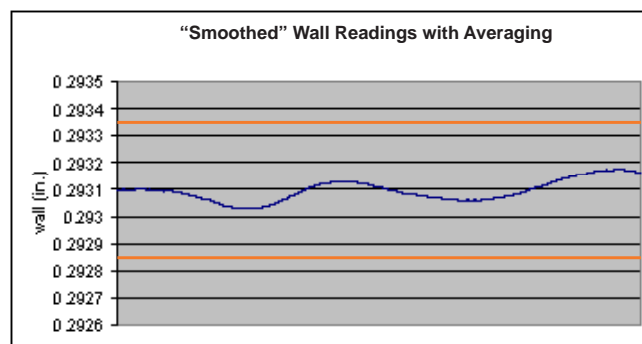
Advanced TrueWall Options, cont.

OD Ultrasonic Measurement

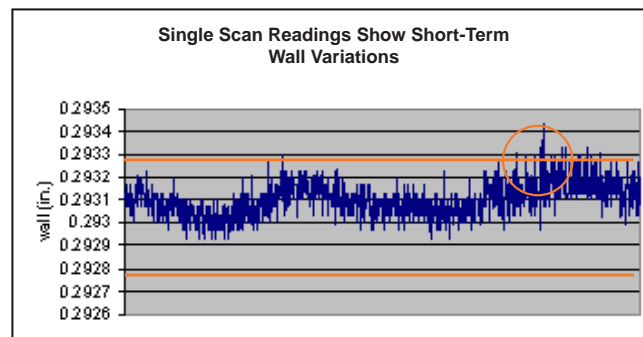
The **TrueWall Option** provides fast, easy-to-understand information about the outer diameter of the product. Working hand-in-hand with this advanced software option, TrueWall produces the optimum transducer echoes to create a high-precision OD measurement. TrueWall OD shortens the delay time and gives you more control over measurements. TrueWall OD also provides a cost-effective alternative for adding Laser OD scanning capabilities to our system, enabling you to handle a range of OD measurement applications from small-to-large size products.

For External to Trough Measurement Applications

For those applications requiring measurements to be taken outside of a cooling trough, TrueWall can be configured as a **self-flooding gauge**. A sealed, water-tight diaphragm assembly immerses the TrueWall gauge in water to perform measurements, and can be mounted external to the trough.



Standard tolerance checking compares averaged wall values against tolerance limits



High-speed tolerance checking compares individual scans against tolerance limits

TrueWall Specifications

	TrueWall 1012	TrueWall 1025	TrueWall 1040	TrueWall 1063
OD Range	0.25 – 12 mm (0.01 – 0.5 in.)	2.5–25 mm (0.1–1.0 in.)	4.0–40 mm (0.16–1.57 in.)	7.5–63 mm (0.30–2.5 in.)
Minimum Wall Thickness¹	Without Thin Wall: 10 MHz: 0.254 mm (0.010 in) 20 MHz: 0.127 mm (0.005 in) With Thin Wall: 20 MHz: 0.025 mm (0.001 in)	Without Thin Wall: 10 MHz: 0.254 mm (0.010 in) 20 MHz: 0.127 mm (0.005 in) With Thin Wall: 20 MHz: 0.025 mm (0.001 in)	10 MHz: 0.254 mm (0.010 in)	5 MHz: 0.508 mm (0.020 in) 10 MHz: 0.254 mm (0.010 in)
Transducers	4, 8	4, 8	4, 8	4, 8
Transducer	5 MHz, 10 MHz, 20 MHz	5 MHz, 10 MHz, 20 MHz	5 MHz, 10 MHz	5 MHz, 10 MHz
Thin Wall Algorithm	To 25 µm (0.001 in.) on products as small as 250 µm (0.010 in.)			

General Specifications	
Connectivity	Ethernet (ModBus TCP, EtherNet/IP, Profinet IO); fieldbus (Profibus, DeviceNet)
Simultaneous host connections	Multiple TCP sockets
Baud Rates	4.8 kbaud to 230 kbaud
Enclosure	IP65 protection-rated enclosure, milled aluminum (for efficient heat dissipation), metallic silver finish
Display	Organic Light Emitting Diode (OLED)
Product Warranty	2 years
Options	Diameter and ovality measurement; high-speed tolerancing; self-flooding gauge configuration; trough height stand; small trough (for mounting outside existing cooling troughs)

¹Maximum wall thickness is dependent on type of material.

For questions or support go to: <https://ndc.custhelp.com/>

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