

ABTIS 1000

Automated Bottle Thickness Measurement System – Conveyor Load

Simple

Operator friendly touchscreen interface.

Repeatable

Automated measurement removes operator introduced error.

Flexible

Vertical wall profile and circumferential testing methods in one package.

Robust

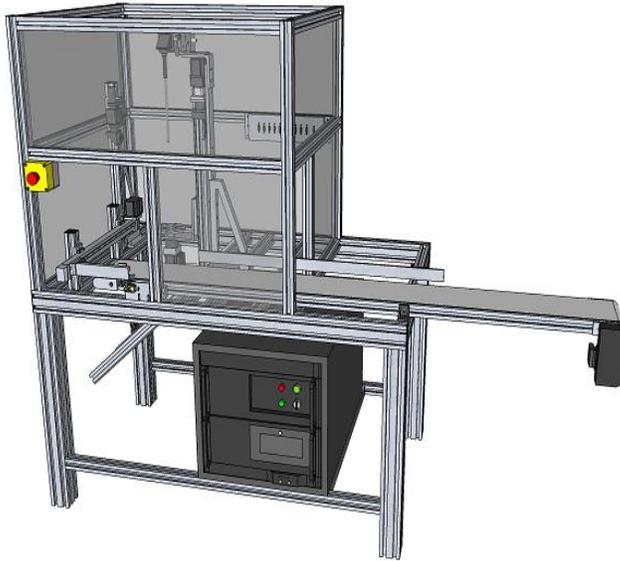
Static sensors and light tube design prevent accidental damage and misalignment.

Automated

Conveyor allows operator to walk away during measurements.

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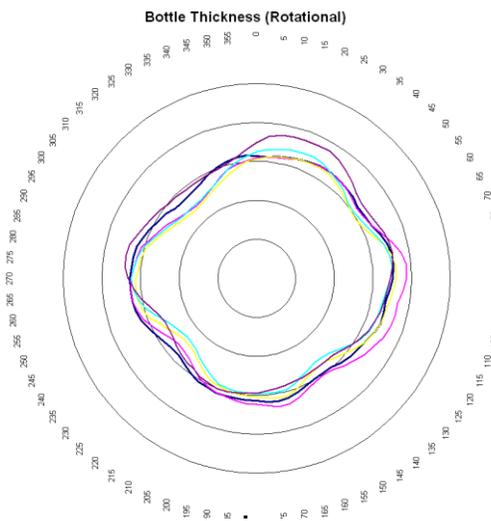
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AVID Corporation is pleased to offer the ABTIS 1000, an offline conveyor-fed bottle wall thickness measurement system for laboratory use. Automated wall scanning at part specific defined heights and angles eliminates tedious and non-repeatable hand measurements. Automatic loading & unloading increases throughput and testing efficiency; the operator only loads the sample set of parts onto the conveyor. Measurement, data capture and part handling is all controlled by the ABTIS 1000.

Two Measurement Methods

Competitive systems perform either circumferential thickness or vertical wall distribution ("wall profile") testing. The ABTIS 1000 is able to perform both methodologies in one efficient package.

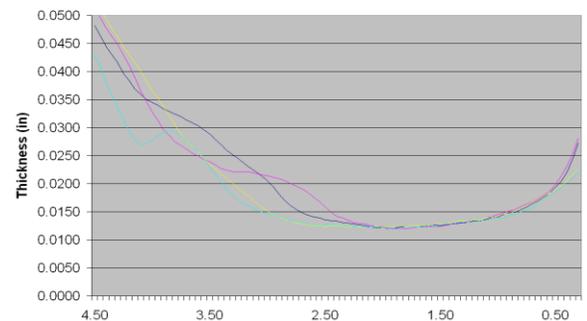


During a circumferential (horizontal) test, the bottle is spun 360° while the system monitors thickness at specified heights. The resulting "bands" of thickness data are of use to those manufacturers monitoring thickness at defined locations around the package.

Circumferential programs can easily be narrowed to provide measurements at set angles, or to highlight min, max and average thickness information for each band in the data stream, simplifying most general data analysis requirements.

Wall profile tests involve the bottle being raised and lowered between selected heights at defined angles. The serpentine measurement technique increases machine efficiency while retaining measurement repeatability and accuracy.

Bottle Profile



Profile data can be used to illustrate material distribution throughout the package, or to demonstrate section distribution, in some cases replacing destructive and time-consuming "section-weight" tests.

Simple Initial Setup

The touchscreen monitor / Microsoft® XP interface makes initial part programming simple and straightforward. Target values and tolerances are entered on-screen using a pop-up keypad. The system features a "AutoSet" routine that automatically determines the scan limits by locating the package height and push-up (clearance height). Following such a procedure, only the test method, heights and angles of interest, and data output location need to be selected. Calibrating to special resin formulations is a simple matter of measuring a known spot on the bottle and entering the "real" thickness value.

Automated Handling

In addition to flexibility, the ABTIS 1000 provides the asset of automatic package handling to the customer. Unlike competitive tabletop systems that must be manually loaded, the ABTIS 1000 conveyor based loading system requires only that an operator place a set of bottles onto the conveyor belt and indicate the number of parts to be measured on the touchscreen. The ABTIS 1000 then automates all the bottle handling, increasing operator productivity by freeing them from this mundane task. Measured bottles leave the system via a chute to a collection bin beneath the system.

Initial handling setup is simple; only a loading distance and speed setting need to be specified during the initial bottle program setup. The load speed can be set to a gentle movement for top-heavy, light-weight, or unstable containers that would otherwise tip over. Centering grippers are not required to hold the bottles in place, only a magnetic load arm change-out attachment may be needed for customers producing non-cylindrical containers.

ABTIS 1000 Technical Specifications

System Type:

Automated Bottle Thickness Measurement

Feeder Type:

Conveyor and w/ Load Arm

Size (Base System):

*60" Width, 40" Depth, 70" Height
1500mm Width, 930mm Depth, 1735mm Height
(Options or customization may alter dimensions)*

Products Measured:

Bottles

Materials Measured:

*Plastics
(Translucent PET, non-UV treated HDPE)*

Dimension(s) Measured:

*Bottle Wall Thickness
Overall Height*

Measurement Time:

*- Varies with Program Setup
- Typical Measurements <35 seconds.
- Typical Cycle Time <60 seconds.*

Container Size Limits:

*- 14" Maximum Height
- 6" Maximum Diameter
- 0.060" Max Thickness*

*(Limitations are for standard system ONLY;
Contact AVID to discuss larger format motion controls.)*

Options:

- Manual Configuration Available

Computer / Operating System:

*- Industrial PC in NEMA 2 Enclosure
- Windows XP Pro O/S*

Data Export Method

*- Microsoft Excel (not included)
- Ethernet Cable to Network*

Units:

MM or Inches.

