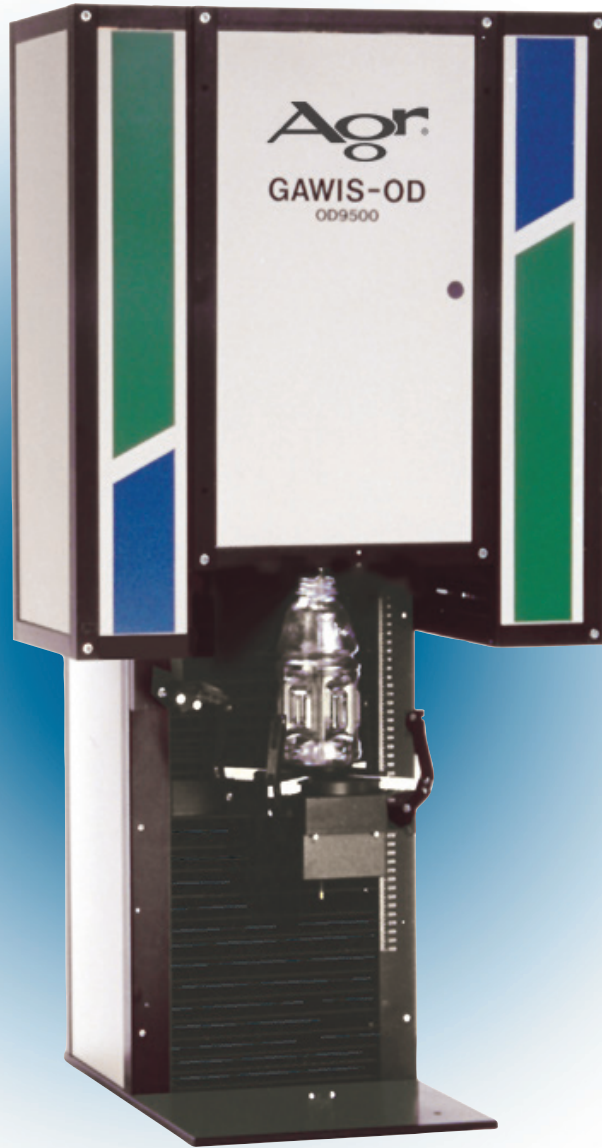




Gawis® Systems



Comprehensive, automatic measuring systems for plastic containers and preforms

- Thickness and dimensional measurements in one operation
- Instantaneous SPC reporting
- Fast, simple, non-destructive testing
- Automated test capabilities

Thickness distribution and dimensions are the most important and critical properties of plastic containers. Potential problems in rigidity, CO₂ retention, O₂ permeation, pressure/vacuum resistance, vertical strength, functionality on filling lines, closure applications, etc. often relate to thickness distribution and/or external dimensions. The Gawis® systems easily and accurately measure thickness and dimensional attributes of containers and preforms.

FEATURES

- Fast, non-destructive, IR-based thickness measurement for container sidewall and base corner
- Removable light-tube permits dimensional measurement of filled and closed containers
- Automatic base clearance measurement
- High-resolution camera system for accurate dimensional measurement (Gawis-OD® system)
- RS-232 serial interface
- Universal centering device for precise sample placement
- Powerful, easy-to-use system software with SPC charting

Gawis® and Gawis-OD® Systems

Gawis® systems are powerful solutions to demanding measurement and quality control requirements.

Two models to choose from:

Gawis® System offers basic thickness distribution measurement, overall height, and data accumulation including:

- Sidewall thickness measurement for containers and preforms
- Base corner thickness measurement
- Overall height
- Base clearance

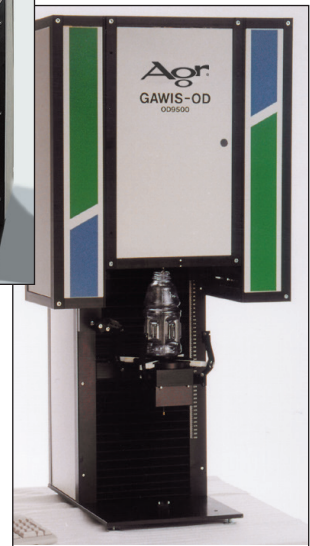
Gawis-OD® System offers thickness measurement plus the ability to measure all critical external dimensions in the neck, finish, and body areas of containers and preforms including:

- Sidewall thickness measurement
- Base corner thickness measurement
- Overall height
- Thread measurements
- Outside dimension
- Tilt/Lean
- Body dimensions
- Base clearance

Both systems contain excellent process control/SPC capabilities, advanced reporting, and quality certification capabilities. They also provide high sampling rates and significant savings in time, labor, and material costs, making these systems efficient tools for testing laboratories, container manufacturers, and container designers.



Gawis® System



Gawis-OD® System

CONSISTENT, REPEATABLE TEST RESULTS

In addition to rapid measurement, computerized operation guarantees that the measurements are performed consistently every time - preventing human error, unnecessary adjustments, and incorrect data use in statistical process control, production-run reporting, and quality certification.

NON-CONTACT, NON-DESTRUCTIVE MEASURING

The Gawis® systems measure thickness based on the sample's absorption of infrared light. A light beam is directed through the sidewall of the container onto a proprietary IR sensor. The amount of light absorbed by the container sidewall is measured and converted into thickness data by the system's microprocessor. Dimensional measurements are performed by a high resolution camera system. The positioning system on the Gawis® products automatically manipulates the sample for precise measurement at predefined locations.

FLEXIBLE PROGRAMMING - BROAD RANGE OF APPLICATIONS

The Gawis® software control system provides pre-programmed parameter values that form a measuring "recipe" for each sample type. The database provides capacity for hundreds of recipes that can be recalled when needed.

Gawis® System with AutoFeed

The Gawis® system combined with AutoFeed offers a totally automated approach to the tedious task of container and preform quality assurance testing. The Gawis® system with AutoFeed performs vital laboratory tests in one automated operation.

The Gawis® system with AutoFeed incorporates an automatic feeding system for increased throughput and walk-away operation. Up to 20 containers or 144 preforms can be loaded at one time, systematically tested and results documented. Once a test sequence is initiated, the Gawis® system with AutoFeed requires no operator intervention to test a series of containers or preforms, freeing lab personnel for other tasks.

AUTOFEED OPERATION

The AutoFeed permits the operator to prepare and place a large set of containers or preforms on a sample tray. A pick and place robot selectively picks a sample from the tray and places it in the test station of the Gawis® system. Samples are individually examined and returned to the tray. Data from each measurement is then automatically stored.



AUTOFEED RETROFITS FOR EXISTING GAWIS® TESTERS*

The AutoFeed retrofit package can turn an existing Gawis® system into an automated test station with hands-off operation, tremendously increasing productivity.

Retrofit packages include:

- AutoFeed unit
- Interface assembly kit
- Auto-centering test table

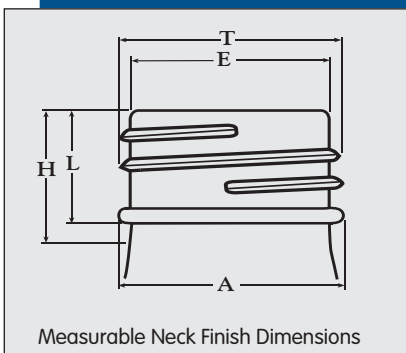
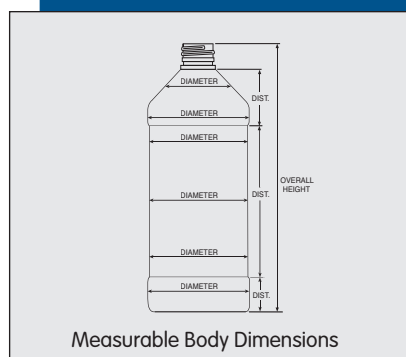
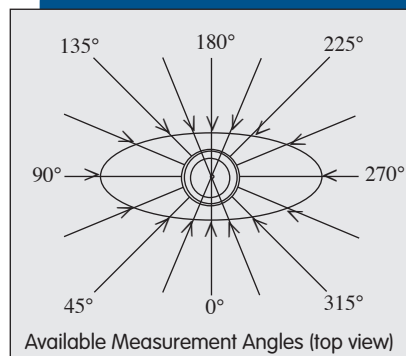
* For additional details and information on compatibility with existing systems, contact your sales representative.

- Walk-away testing
- Automatically documented results

Gawis® system with AutoFeed brings the utility and value of testing to a new level.

OPTIONAL ACCESSORIES FOR GAWIS® SYSTEMS

- ✓ AutoFeed system
- ✓ Special sample adaptors for containers and preforms
- ✓ Sample trays (AutoFeed unit)
- ✓ Service/Calibration agreement



Agr reserves the right to alter design and/or specifications without notification.