



Profiler Gauge PG9800T



**Accurate, effective, non-destructive
alternative to section weight measurements**

- Eliminate section weight
- Identify shifts in distribution instantly
- View graphic display of wall thickness

The Profiler Gauge PG9800T is an automated measuring device for at-the-line and laboratory-based wall thickness distribution measurement of PET containers.

- ✓ **Economical alternative to section weight measurements**
- ✓ **Precision tool for determining wall thickness distribution and overall height**
- ✓ **Provides fast, highly efficient data for the control of the blowmolding process**

WHY MEASURE THICKNESS DISTRIBUTION?

Sidewall thickness distribution information is the key factor for achieving the optimum preform heating profile of the blowmolder. Additionally, material distribution is the largest indicator of overall bottle performance. It is the most sensitive characteristic for detecting changes in process parameters affecting topland, burst, volume expansion, water vapor transmission rate, and other critical properties essential to the successful performance of the package.

THE Agr SOLUTION

The Agr Profiler Gauge PG9800T was developed in response to a demand by PET container manufacturers for a fast, simple method to determine the wall thickness distribution. The PG9800T is designed to fill this requirement by providing **non-destructive** wall thickness distribution measurements in graphic form. The entire test process of the PG9800T is completely automatic and takes just a few seconds. Because the PG9800T can determine thickness distribution without destroying the container, it can be used to replace outmoded destructive methods, saving time and money.

PG9800T – MEASUREMENT PRINCIPLE

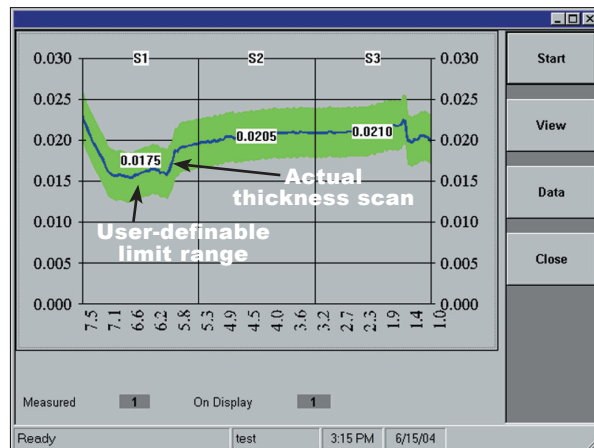
The PG9800T uses IR absorption technology to accurately determine wall thickness in PET and similar containers. A light beam is directed through the sidewall of the bottle. A proprietary sensor detects the amount of IR absorbed by the container sidewall and calculates the depth of the IR absorption peaks to determine the bottle's thickness at various points over its length.

QUICK AND EASY OPERATION

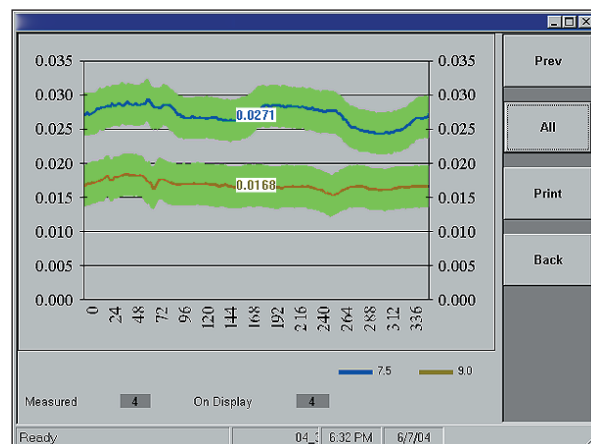
To use the PG9800T, a bottle is placed on the test table and the operator only needs to push a button to start the operation. Once initiated, a light tube descends into the bottle, continuously detecting sidewall thickness distribution and overall height until it reaches the bottom. The large, integrated display instantly shows the actual thickness profile against the pre-programmed tolerance. The average thickness is calculated automatically.

SIMPLE SETUP & EASY JOB CHANGE

The PG9800T requires no at-the-line programming or job-change tools. The operator simply selects the measurement profile from a menu and runs the test. Data is automatically stored along with that profile. When a profile for a new container is required, setup is simple, utilizing the built-in "teach mode" setup assistant.



VERTICAL THICKNESS PROFILE



HORIZONTAL THICKNESS PROFILE

MEASUREMENT MODES

Vertical Thickness Profile Measurement

In this mode, the PG9800T scans the full length of a container's sidewall to gather thickness data. Up to eight operator-defined vertical sectors can be programmed into a test profile for comprehensive bottle measurement. Wall thickness measurement results can be displayed in graphical or numerical format, as section averages.

Horizontal Thickness Profile Measurement

This function permits thickness measurements to be taken at a specific horizontal position on a container body. Up to eight operator-defined horizontal sectors can be programmed into a test profile.

INTEGRATED SECTION AVERAGES PERFORMED AUTOMATICALLY

Using the comprehensive thickness data, the PG9800T can automatically calculate the integrated section averages for either three or five section applications. With this information, the PG9800T can provide thickness data that is significantly more accurate and cost effective than traditional cutting and weighing of bottle sections. In many applications, the PG9800T can replace destructive, labor-intensive methods.

GRAPHICAL DISPLAY OF TEST DATA

At the conclusion of a test, the PG9800T automatically plots a thickness profile and graphically displays it on its built-in display. For each sample, test results can be viewed as an average thickness profile, or when multiple sectors are measured, graphs for each sector can be viewed at the same time. This provides a quick and easy way to identify distribution shift and process changes.

BENEFITS:

- Provides accurate and repeatable data on thickness distribution
- Improves profitability via higher productivity and reduced waste
- Removes the human element and tedium from section weight measurement
- Replaces destructive test methods
- Provides vital data for control of blow molding process
- Offers rapid throughput, at and near the line
- Fast payback

PG9800T Performs:

- Vertical Sidewall Thickness
- Integrated Section Averages
- Overall Height
- Horizontal Sidewall Thickness

The screenshot displays a software window titled 'Section Averages'. It contains a table with columns for 'Summary', 'S1/in', 'S2/in', and 'S3/in'. The data is organized into three sections: 'Summary', 'Sample 1', and 'Sample 2'. Each section lists measurements for four angles: 0 deg, 90 deg, 180 deg, and 270 deg. The 'Summary' section shows average values for each angle. The 'Sample 1' and 'Sample 2' sections show individual measurements for each angle. The status bar at the bottom indicates 'Ready' and the time '04:24 PM 6/10/04'.

Summary	S1/in	S2/in	S3/in
0 deg	0.0250	0.0122	0.0141
90 deg	0.0257	0.0127	0.0148
180 deg	0.0248	0.0125	0.0145
270 deg	0.0258	0.0126	0.0139

Sample 1	S1/in	S2/in	S3/in
0 deg	0.0250	0.0122	0.0141
90 deg	0.0257	0.0127	0.0148
180 deg	0.0247	0.0125	0.0146
270 deg	0.0261	0.0126	0.0140

Sample 2	S1/in	S2/in	S3/in
0 deg	0.0249	0.0122	0.0141
90 deg	0.0256	0.0127	0.0148
180 deg	0.0249	0.0124	0.0145
270 deg	0.0256	0.0126	0.0139

The screenshot displays a software window titled 'Parameters'. It contains a form with various settings for the PG9800T. The 'Name' field is set to '2lit_broch'. The 'Angles' field is set to '0 45 90 180'. The 'Number of measurement points' is set to '136'. The 'Number of sections' is set to '3'. The 'Section Setup' is set to 'Automatic'. The 'Start Height' is set to '11.575 in'. The 'End Height' is set to '0.945 in'. The 'Return Height' is set to '12.500 in'. The 'Reference Profile' is set to '0.002 in'. The 'Tolerance Low' is set to '0.004 in'. The 'Tolerance Hi' is set to '0.004 in'. The status bar at the bottom indicates 'Ready' and the time '11:26 PM 6/6/01'.

Parameters	Calibration	System	Service
Name	2lit_broch	Horizontal	
Angles	0 45 90 180		
Number of measurement points	136	Measure Height	
Number of sections	3	Averages	
Section Setup	Automatic		
Start Height	11.575 in		
End Height	0.945 in		
Return Height	12.500 in		
Reference Profile	0.002 in		
Tolerance Low	0.004 in		
Tolerance Hi	0.004 in		

PG9800T FEATURES

- Performs all thickness and height measurements in a single operation
- Quick, accurate, non-contact, non-destructive method
- Automatically records and analyzes data
- Measures up to eight sectors around the container
- Provides integrated section average calculations for three or five section applications
- Internal database stores data for numerous container types
- Auto-teach mode for easy setup
- Simple, graphical screen for viewing ongoing test results
- Windows® XPE operating system
- LCD touch screen operator interface
- USB printer and data connectivity
- Rotary table for automatic positioning of test samples

OPTIONAL ACCESSORIES

- ✓ Spare Parts Package
- ✓ Extended Service/Calibration Agreement