

Technical News Bulletin

Horseheads, January 2025



MiniLab Non-Round Wall Thickness Gauge

- Fully automated non-contact measurement of glass for round and non-round containers
- No mechanical adjustment for different articles
- Thickness sensor 'follows' the profile of the container

Introduction

The MiniLab Non-Round Wall Thickness Gauge takes advantage of new and innovative technology to automate the measurement of the wall thickness for round and non-round glass containers. This new gauge measures wall thickness at several locations on the container. No mechanical adjustments are required for different articles. The thickness sensor automatically 'follows' the profile of the container for optimum measurement.

During the 360 degree rotation of the container the thickness sensor captures information to calculate the glass thickness at each location.



Features

Once installed, configured, and calibrated the MiniLab Non-Round Wall Thickness Gauge does not require any mechanical adjustment. When programming the article the user specifies the locations for the thickness measurements. For each location the thickness measurement is performed 360° around the container. Up to 10 locations can be specified. Those locations can be of different shapes and sizes.

The MiniLab D automatically positions the container in front of the thickness sensor at the locations programmed for the article. The servo-controlled linear slide maintains the sensor at the optimum distance from the glass surface at all time for accurate measurement. During the container 360° rotation the sensor continuously captures the thickness and sends this information to the data processing unit. The information is then processed to calculate the glass thickness for the corresponding location.

When programming the article the user can specify independent minimum and maximum thickness limits for each measurement location.

Specification

- Measures glass thickness for round and non-round containers
- Measures glass thickness 360° around the container at up to 10 locations
- Measurement locations can be different shapes and sizes
- Measures containers of any colour glass
- Sensor spot size diameter of 10µm
- Measures glass thickness between 0.5mm and 10mm
- Accuracy/precision: +-0.15mm
- Availability / Application

Installation Requirements

The Non-Round Wall Thickness Gauge can be installed on any MiniLab D.

Once installed, configured, and calibrated the MiniLab Non-Round Wall Thickness Gauge does not require any mechanical adjustment. When programming the article the user specifies the locations for the thickness measurements. For each location the thickness measurement is performed 360° around the container. Up to 10 locations can be specified. Those locations can be of different shapes and sizes.

The MiniLab D automatically positions the container in front of the thickness sensor at the locations programmed for the article. The servo-controlled linear slide maintains the sensor at the optimum distance from the glass surface at all time for accurate measurement. During the container 360° rotation the sensor continuously captures the thickness and sends this information to the data processing unit. The information is then processed to calculate the glass thickness for the corresponding location.

When programming the article the user can specify independent minimum and maximum thickness limits for each measurement location.

Features

Once installed, configured, and calibrated the MiniLab Non-Round Wall Thickness Gauge does not require any mechanical adjustment. When programming the article the user specifies the locations for the thickness measurements. For each location the thickness measurement is performed 360° around the container. Up to 10 locations can be specified. Those locations can be of different shapes and sizes.

The MiniLab D automatically positions the container in front of the thickness sensor at the locations programmed for the article. The servo-controlled linear slide maintains the sensor at the optimum distance from the glass surface at all time for accurate measurement. During the container 360° rotation the sensor continuously captures the thickness and sends this information to the data processing unit. The information is then processed to calculate the glass thickness for the corresponding location.

When programming the article the user can specify independent minimum and maximum thickness limits for each measurement location.

Benefits

- Fully automated non-contact measurement of glass thickness for round and non-round containers
- Industrial design with very few moving parts
- No mechanical adjustment for different articles
- Thickness sensor 'follows' the profile of the container

Limitations

- Glass surface must be vertical
- Thickness measurement may be degraded in heavily embossed area
- Coverage may be reduced on container with high aspect ratio (i.e: flask)