



Hall-Effect Thickness Gauge

Non-destructive wall and base thickness of bottles, containers and other non-magnetic parts – accuracy unaffected by the shape of the part, live reading with automatic max / min / average.

The MTG-100 measures the thickness of non-magnetic materials such as plastics, glass, composites, aluminium and titanium without cutting or damaging the part. A steel target ball is placed on one side of the wall and the Hall-effect probe on the other; the gauge reads the distance between them as wall thickness. Widely used in the beverage, food, chemical and packaging industries for bottle wall and bottle base inspection.

Up to 25.4 mm

Max Thickness

with optional 5.00 / 7.00 mm balls

±1% of reading

Best Accuracy

3/16" ball, multi-point calibration

0.001 mm

Resolution

0.01 or 0.001 mm selectable

Max / Min / Avg

Live Statistics

captured automatically

IN THE LAB



Live reading with max / min / average on screen



Stainless-steel probe



Calibration thickness shims

KEY FEATURES

- Non-Destructive, Shape-Independent**
The part stays intact - no cutting or sectioning. Measurement accuracy is not affected by the shape of the material, so round, square and irregular bottles and containers can be measured the same way.
- Reaches Corners, Grooves and Dead Spots**
Not limited by the form of the part: parts of complex shape and different sizes can be measured quickly at any point, including corners, grooves and other areas that are hard to reach with a contact micrometer.
- Durable Stainless-Steel Probe**
The probe is made of stainless steel for a longer service life and more stable readings in daily QC use.
- Optional 5.00 mm and 7.00 mm Balls, up to 25.4 mm**
Beyond the three standard target balls, optional 5.00 mm and 7.00 mm magnetic balls extend the measuring range to a maximum thickness of 25.4 mm, for thick-walled containers and parts.
- Large Colour Screen with Live Statistics**
A larger colour screen with bigger, clearer characters shows the current thickness in real time and automatically captures and records the maximum, minimum and average values for analysis and comparison. Metric or imperial units selectable.

TECHNICAL SPECIFICATIONS

MEASUREMENT		DISPLAY & DATA	
Principle	Hall effect, non-destructive	Display	Large colour screen
Materials	Non-magnetic: plastic, glass, Al, Ti	Readout	Live value + max / min / average
Test Items	Bottle wall and bottle base thickness	Sampling Rate	16 readings per second
Range, 1/16" ball (1.59 mm)	0.100 - 2.590 mm	Data Memory	100,000 readings
Range, 1/8" ball (3.18 mm)	0.100 - 4.570 mm	Data Output	USB export to Excel (optional)
Range, 3/16" ball (4.76 mm)	0.100 - 6.350 mm	Units	mm or inch
Range, 5.00 mm magnetic ball (optional)	4.00 - 19.00 mm	Language	English / Chinese
Range, 7.00 mm magnetic ball (optional)	4.00 - 25.4 mm	Probe	Stainless steel
Accuracy, basic calibration	±3% to ±4% of reading	POWER & PHYSICAL	
Accuracy, multi-point calibration	±1% to ±3% of reading	Power Supply	220 V, 50 Hz (24 V adapter supplied)
Multi-point calibration	Up to 5 points	Operating Temperature	0 to +50 °C
Resolution	0.01 or 0.001 mm	Dimensions	300 × 50 × 190 mm
		Weight	4 kg

TARGET BALL GUIDE

TARGET BALL	THICKNESS RANGE	ACCURACY (OF READING)
1/16" (1.59 mm)	0.100-2.590 mm	±4% basic / ±3% multi-point
1/8" (3.18 mm)	0.100-4.570 mm	±4% basic / ±2% multi-point
3/16" (4.76 mm)	0.100-6.350 mm	±3% basic / ±1% multi-point
5.00 mm*	4.00-19.00 mm	±3% basic / ±1% multi-point
7.00 mm*	4.00-25.4 mm	±3% basic / ±1% multi-point

* optional magnetic ball, supplied to order



APPLICATIONS

- Plastic bottles, jars and containers - wall and base thickness
- Glass bottles and vials
- Beverage and food packaging QC
- Chemical and agrochemical containers
- Composite, aluminium and titanium parts

STANDARD CONFIGURATION

- main unit
- probe
- probe cable
- power cord
- steel balls
- calibration fixture
- zeroing fixture
- calibration thickness shims
- technical documents



Standard accessories: calibration and zeroing fixtures, steel balls and calibration thickness shims

Optional: 5.00 / 7.00 mm balls · PC data software · foot switch · printer · non-standard test fixtures · Technical support (EN / ZH)