Mikrosize®

iThick-200

Ultrasonic Thickness Gauge

Video

Contact us

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Product Features and Application

Product Features

- Utilizes both Interface Echo-to-backwall Echo Differential (IE) and Pulse-Echo (PE) ultrasonic principles, providing PE, IE, and TEST measurement modes for accurate thickness gauging through coatings.
- Display resolution of 0.01 mm with a measurement error limit of ±0.4 %H (H = workpiece thickness), ensuring high precision for demanding applications.
- Offers zero calibration and velocity calibration; automatically corrects systematic errors and determines material velocity from a known-thickness reference block.
- Stores complete measurement data—thickness value, sound velocity, and time stamp—up to 500 data groups. High-contrast LCD with LED backlight clearly displays thickness, coupling status, battery level, calibration state, velocity, time, etc., under any lighting conditions.
- Powered by two AA alkaline batteries, providing up to 5 hours of continuous operation (backlight off) with real-time battery indicator.
- Auto-power-off after 2 minutes (adjustable) of inactivity; manual power switch also provided for user convenience.
- Configurable settings: unit system (metric/imperial), scan mode (on/off), beep, flashing alarm, probe parameters, factory reset, data export to PC, file deletion, contrast, system time, standby time, and firmware version display—meeting diverse user needs.

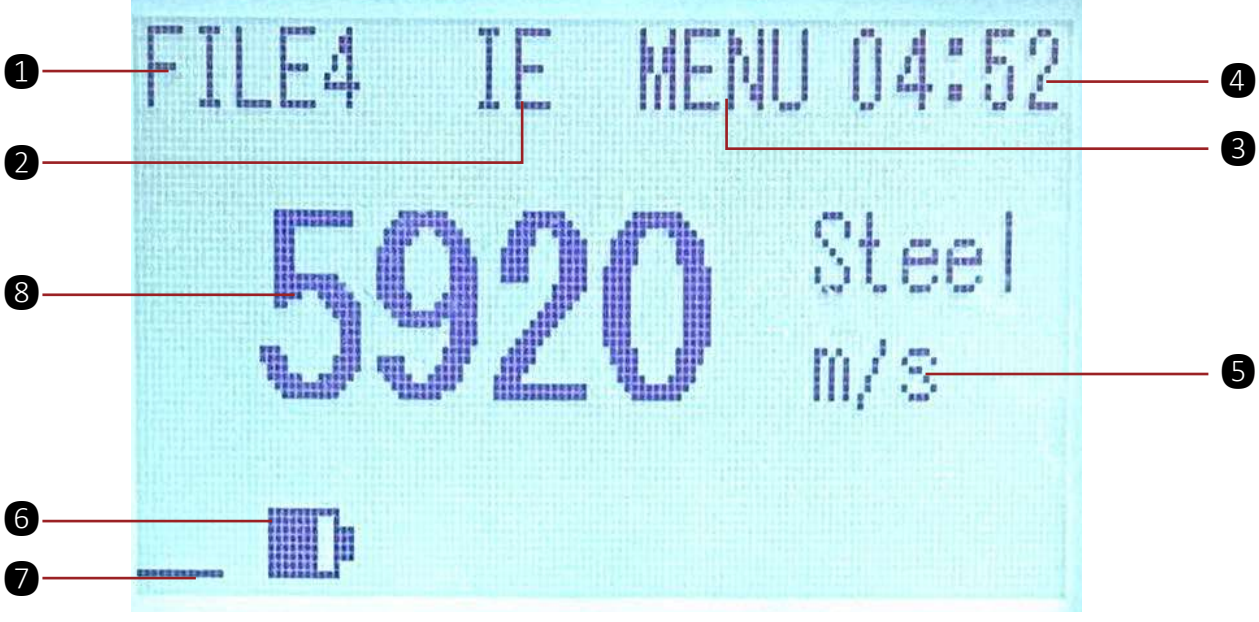
Application

- Purity verification: employs ultrasonic testing to detect adulteration inside gold and silver bars, coins, and other precious metals, accurately determining their fineness.
- Precise thickness measurement of plates made from various materials—steel, non-ferrous metals, etc.—across different ranges:
  - Standard mode: 1–300 mm (steel)
  - Cast-iron mode: 4–508 mm
  - Precision mode: 0.75–35 mm
  - High-temperature mode: 4.0–80 mm

Instrument Interface

1. Power / Backlight 2. Menu 3. Velocity 4. Enter / Confirm 5. Calibrate
6. Store 7. Light Source Port 8. Up Arrow 9. Down Arrow 10. Reference Block

Button Function

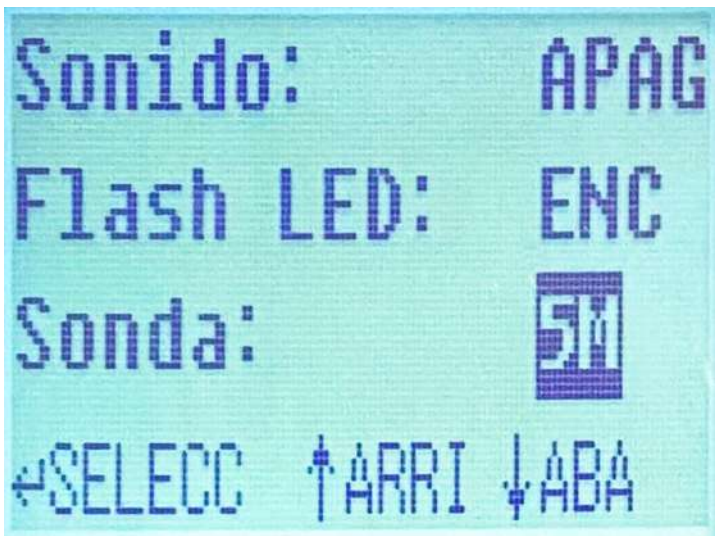


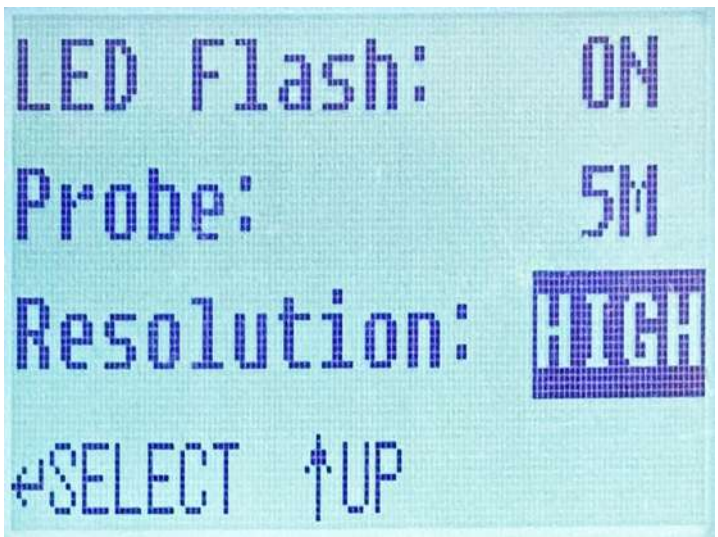
1. Current File Number **2. Measurement Mode** **3. Menu Option** **4. Time**
5. Sound Velocity Unit **6. Battery Level** **7. Coupling Indicator** **8. Displayed Value**

System Settings

●Within the menu interface, users can configure:
- Language: Chinese, English, or Spanish
- Unit system: Metric or Imperial
- Scan mode

●Scan Mode:
In this mode, the instrument continuously updates and displays the real-time thickness value, allowing uninterrupted measurement while the probe is kept in contact with the workpiece.





●Users can configure:

- Beep and Flash Alarm: Enable or disable audible beep and visual flash alerts while in measurement mode.
- Probe Selection: Choose the appropriate probe model.
- Resolution: Set the measurement resolution to Low, Medium, or High.

Test Mode

- PE (Pulse-Echo):Based on the pulse-echo ultrasonic principle, suitable for measuring the thickness of any material through which ultrasound can propagate at a constant velocity and from which a clear back-wall echo can be obtained.
- IE (Interface–Echo):Uses the difference in sound-path time between the interface echo and the back-wall echo; it can penetrate coatings (coating thickness < 1 mm) to provide an accurate thickness reading of the substrate.
- TEST: Employs ultrasonic technology to detect internal adulteration and determine the purity of precious metals; primarily used for verifying gold bars, silver bars, coins, and other bullion products.

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Technical Specification

Working Principle	Ultrasonic
Traversed Coating	IE Mode Can Traverse Through 1500um Coating
Measuring Mode	PE/IE
Measuring Range	0.75~300mm
Precision	H<10mm±0.05mmH≥10mm±(0.05mm+H/100)mm
Probe Size	Standard Delivery 10mm
Resolution	0.1/0.01mm Optional
Touch Screen	2.0 " FSTN, 128 * 64 Dot Matrix, LED Backlight
Measuring Material	Steel, Iron, Glass, Plastic, Aluminum, Etc
Sound Velocity	1000~9999m/s
Storage	500 Groups Of Data
Measuring Unit	Metric/Imperial
Language	English Or Other Customized Languages
Working Temperature	0~50°C
Ambient Humidity	Relative Humidity Less Than 90%
Power Supply	2*1.5V AA Battery
Product Dimensions	150*71*33mm
Net Weight	160g

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Packing List

Item	Qty
Main Unit	1 unit
Probe	1 pc
Couplant	1 bottle
Dry Battery	2 pcs
Instrument Case	1 case
Documents	1 set