

iThick-200

Ultrasonic Thickness Gauge



Video



Contact us

Mikrosize Precision Instrument Co.,Ltd

A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.

Web: www.mikrosize.com

Email: mikrosize@mikrosize.com



Features and Applications

The iThick-200 ultrasonic thickness gauge is a highly functional and precise measuring instrument. It adopts the interface echo and bottom echo difference (IE) thickness measurement principle and the pulse reflection (PE) ultrasonic measurement principle, and has a variety of practical functions. It is widely used in multiple fields.

Product Features

- By adopting the PE, IE and testing modes, it can measure the thickness of the coating and also determine the purity of precious metals. It has a wide range of applications.
- Equipped with high-precision timing chips and calibration models, it has a wide measurement range and high accuracy, with an error limit as low as 0.4% H and a display resolution of 0.01mm.
- It can fully store 500 sets of measurement data, including thickness, sound velocity and time information. It supports both manual and automatic storage, making it convenient for data retrieval.
- It features zero-point calibration, reverse measurement of sound velocity, intuitive indication of coupling and power status, ensuring stable and reliable measurement conditions.
- The LCD display has backlighting and adjustable contrast, suitable for various lighting conditions. It is powered by two 5-volt batteries and can operate continuously for up to 5 hours.
- Multiple probes are available, suitable for different materials, thicknesses and temperature scenarios. The high-temperature probe can withstand temperatures ranging from -10°C to 310°C, meeting special measurement requirements.



Features and Applications

Product Applications

- Used for the identification of precious metals such as gold bars and silver bars, to test whether there is any adulteration inside and to determine the purity.
- Suitable for the petroleum and chemical industries, it can accurately measure the thickness of various plates and processed parts.
- Measurement of penetrable coatings (< 1mm) can be conducted without removing the coating, allowing for accurate thickness values to be obtained.
- The high-temperature probe can measure the thickness of high-temperature workpieces in an environment ranging from -10°C to 310°C.
- For cylindrical surfaces such as pipes, the probe is adjusted to obtain stable and accurate thickness values.
- The test mode can quickly check whether the product thickness is qualified, meeting the requirements of quality inspection.



Product Details



1.Screen

2.Keyboard

3.Reference block

4.Probe



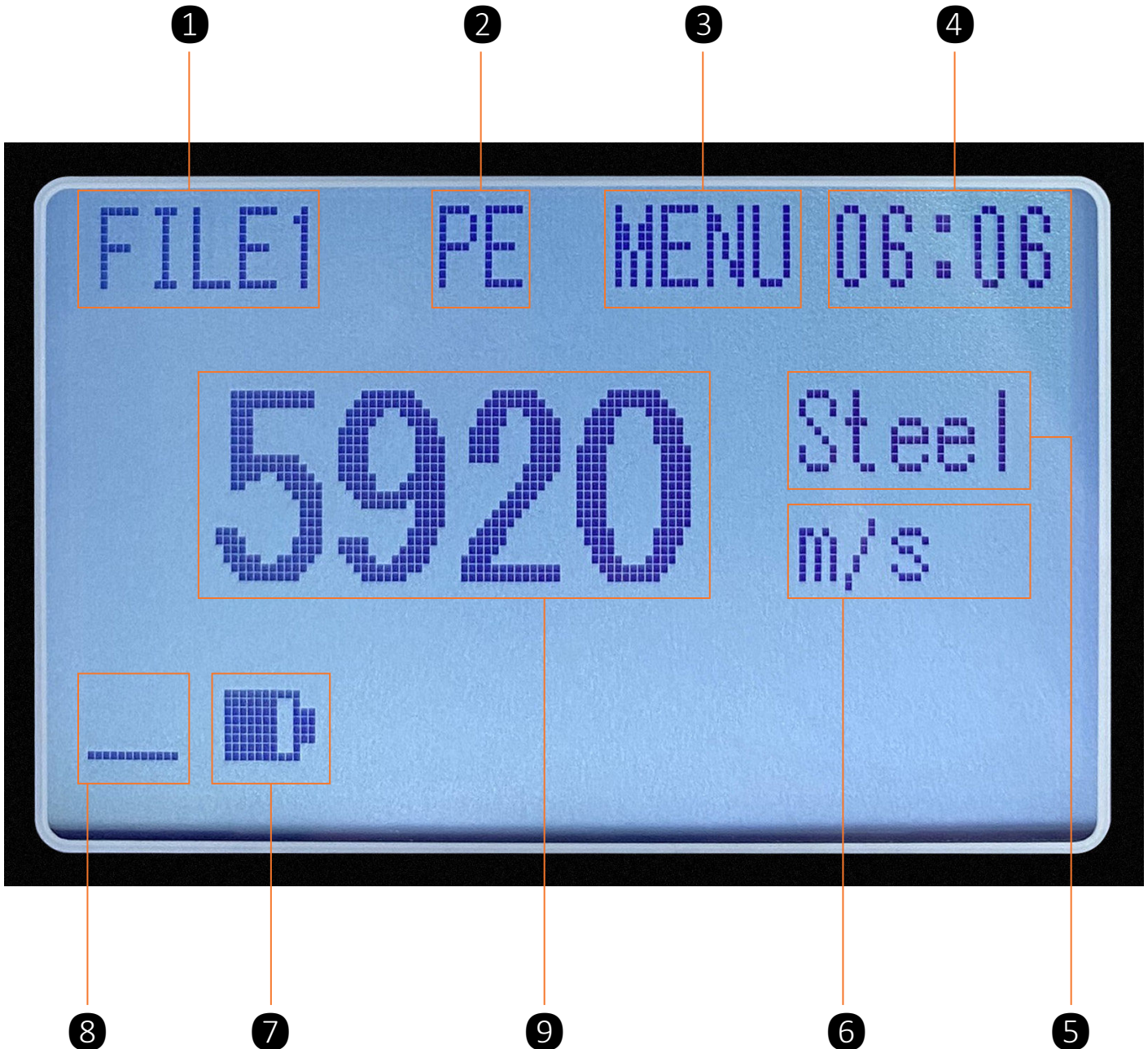
1.Battery

2.Battery Compartment

3.Battery Cover

Product Details

Screen Content



1.Current file number (there are a total of five files)

2.Measurement mode (three modes: test/PE/IE are selectable)

3.Menu

4.System time

5.Materials

6.Unit of sound velocity

7.Battery level indicator

8.Coupling signal indicator

9.Display value

Product Details

Keyboard Content



1.Switch / Backlight

4.Confirm button

7.Lighting outlet

2.Menu key

5.Calibration button

8.Up key

3.Sound speed key

6.Storage key

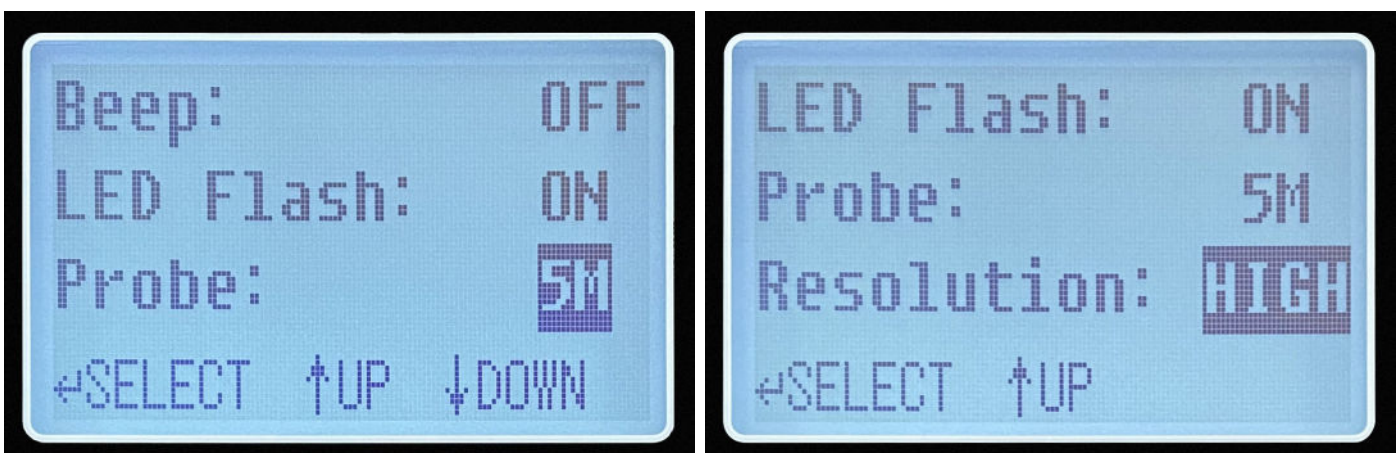
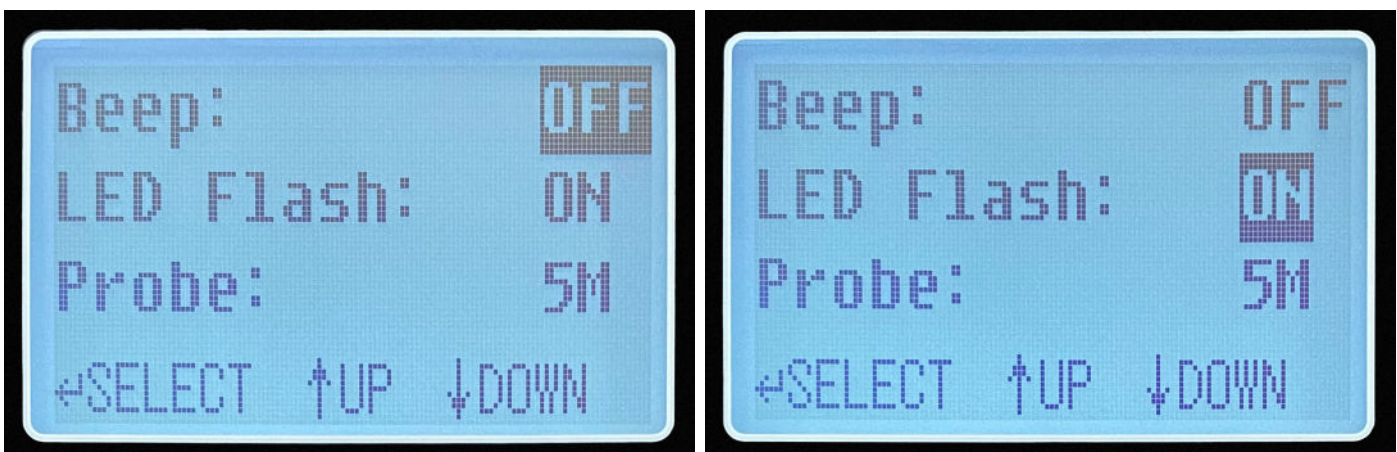
9.Down key

Operation Interface

System Settings



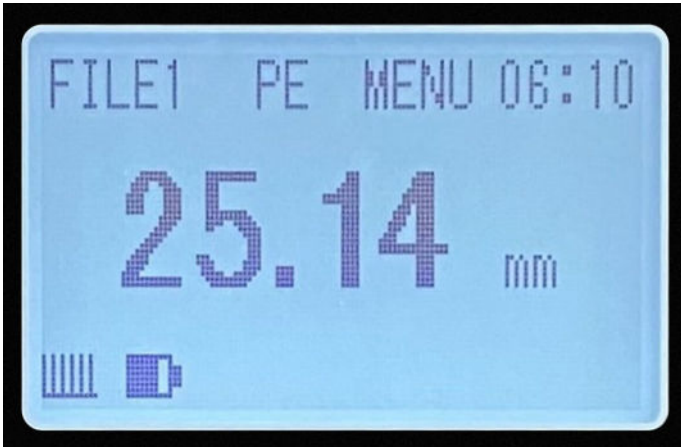
- Users can set the language (Chinese, English, Spanish), units (metric, imperial) and scanning mode in the menu interface.
- Scanning mode: Measures the thickness and displays it in real time. This mode allows for continuous measurement using a continuous probe.



- Users can set the alarm sound and flashing (used in measurement mode); set the probe, resolution (low, medium, high).

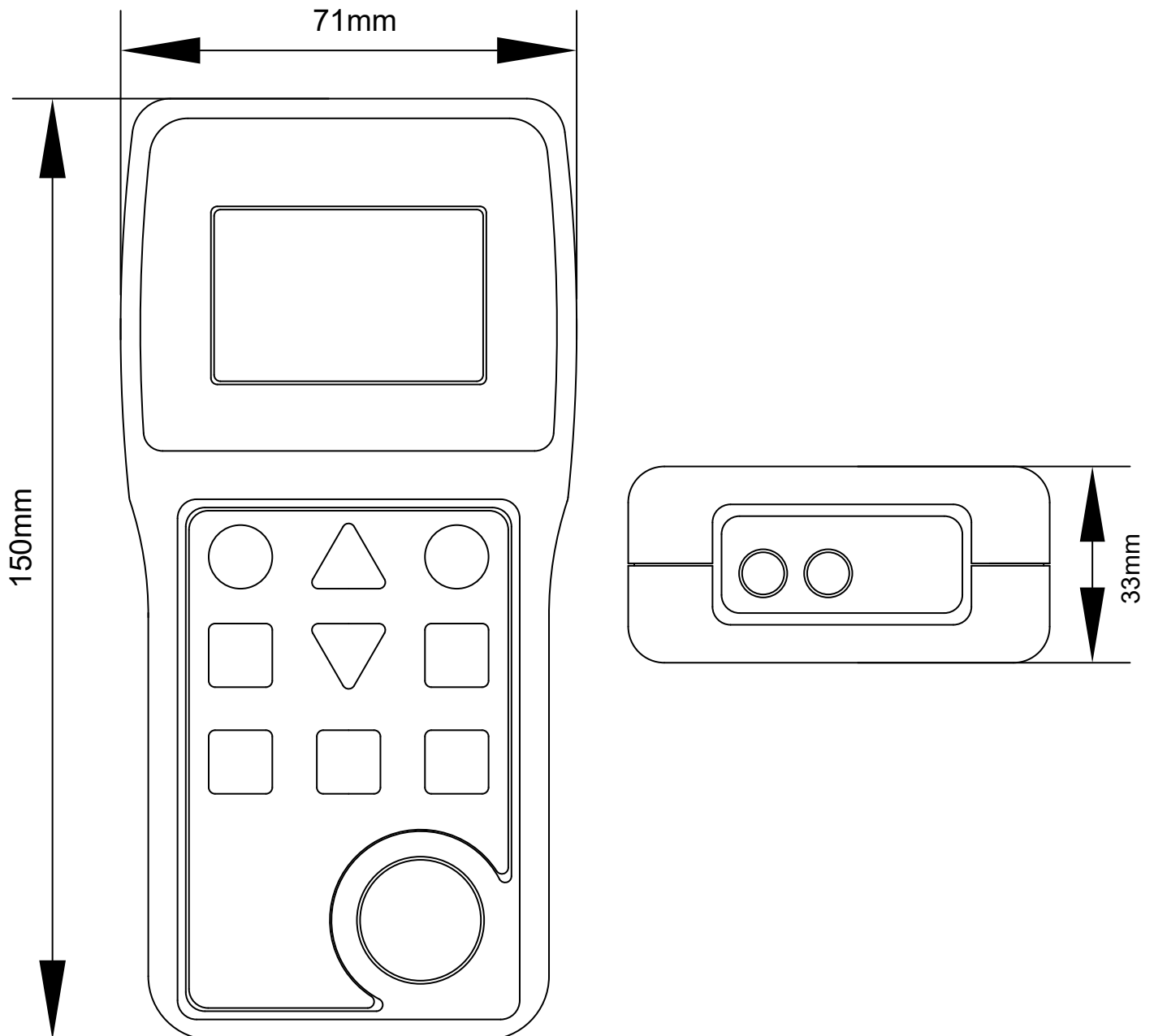
Operation Interface

Test Mode



- "PE" refers to the pulse-echo ultrasonic measurement principle, which is applicable to the measurement of the thickness of various materials where ultrasonic waves can propagate at a constant speed within the material and can be reflected from its backside.
- "IE" represents the difference in sound velocity between the interface echo and the bottom surface echo. It can precisely measure the thickness of the measured object by penetrating the coating (with the coating thickness being less than 1MM).
- "Testing" involves using ultrasonic technology to check whether there are any adulterations inside precious metals and to determine their purity. It is mainly used for the identification of gold bars, silver bars, gold coins, and silver coins, etc.







Instrument Dimension



Technical Specification

Model	Basic type	Cast iron type	Precision type	High-temperature type
Measurement Range (Steel)	1~300mm	4~508mm	0.75~35mm	4.0~80mm
Measurement Error (< 10mm)	±0.04mm	±0.04mm	±0.04mm	±0.05mm
Measurement Error (≥ 10 Mm)	±0.4%H mm	±0.4%H mm	±0.4%H mm	±0.4%H mm
Measure The Frequency	5 MHZ	2 MHZ	7 MHZ	5 MHZ
Working Principle	Ultrasound			
Translucent Coating	The IE mode can penetrate through a 1500um coating.			
Measurement Mode	PE/IE/Testing			
Measurement Range	0.75~300mm			
Precision	H<10mm±0.05mmH≥10mm±(0.05mm+H/100)mm			
Probe Size	Standard diameter: 10mm			
Resolution	0.1/0.01mm options			
Display Screen Size	2.0" FSTN, 128*64 dot matrix, LED backlight			
Measurable Material	Steel, iron, glass, plastic, aluminum, etc			
Sound Velocity Range	1000~9999m/s			
Storage Capacity	500 sets of data			
Measurement Unit	Metric/American System			
Support Language	Chinese/English/Spanish			
Working Temperature	0~50°C			
Environmental Humidity	Relative humidity is less than 90%.			
Power Supply	2 x 1.5V AA batteries			
Product Size	150*71*33mm			
Product Weight	160g			

Standard Delivery

Name	Qty	Photo
Host Machine	1 pc	
5m Single Crystal Probe	1 pc	
Coupling Agent	1 pc	
User Manual	1 pc	
Dry Cell	2 pcs	
Instrument Sealed Box	1 pc	
Warranty Card	1 pc	
Certificate Of Conformity	1 pc	

Sound Velocity Ratios

Name	Appendix: sound velocity ratios of various materials
Materials	Speed of sound (m/s)
Aluminum	6320
Zinc	4170
Silver	3600
Gold	3240
Tin	3320
Steel	5920
Brass	4430
Copper	4700
SUS	5970
Acrylic (Or Similar) Resin	2730
Water (At 20°C)	1480
Glycerol	1920
Silicic Acid Gelatinous Substance	2350