

# iThick-220

## Ultrasonic Thickness Gauge



### Contact us

**Mikrosize Precision Instrument Co.,Ltd**

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

Web: [www.mikrosize.com](http://www.mikrosize.com)

Email: [mikrosize@mikrosize.com](mailto:mikrosize@mikrosize.com)



Web: [www.mikrosize.com](http://www.mikrosize.com)

Email: [mikrosize@mikrosize.com](mailto:mikrosize@mikrosize.com)

# Product Features and Application

- Suitable for measuring the thickness of metals (such as steel, cast iron, aluminum, copper, etc.), plastics, ceramics, glass, glass fiber and any other good conductors of ultrasonic waves
- It can be equipped with a variety of dual crystal probes with different frequencies and different crystal sizes
- The known thickness can be used to measure the sound velocity to improve measurement accuracy
- Features a coupling status indication function.
- Equipped with EL backlight display for convenient use in low-light environments.
- Portability and ease of operation
- It has a remaining power indicator function, which can display the remaining battery power in real time, and has power saving functions such as automatic sleep and automatic shutdown;
- Compact, portable, and highly reliable, suitable for harsh operating environments with resistance to vibration, impact, and electromagnetic interference.
- With USB communication interface, it can be connected to external data processing software
- Features an Audible and Visual Alarm system that provides an alert when measurements exceed the set upper or lower limits.
- The power supply uses 4 pcs AAA (size 7) 1.5V batteries, which can be operated continuously for 250 hours without backlighting
- On the basis of the standard model, it adds communication functionality, enabling data exchange with a PC. It supports real-time communication via the computer and can be used as a small, single-channel online instrument (requires a dedicated probe compatible with online products).

- It can measure the thickness of metals and other materials, and can measure the sound velocity of materials
- It can monitor various pipes and pressure vessels in production equipment, and monitor their thinning degree after corrosion during use
- It can accurately measure various plates and various processed parts
- It can be widely used in various fields such as petroleum, chemical industry, metallurgy, shipbuilding, aviation, aerospace, etc.



Mikrosize



# Instrument Structure



**1. Probe connector**  
**4. Instrument buttons**

**2. Ultrasonic probe**  
**5. Calibration Block**

**3. Display screen**

# Instrument Interface



- |  |   |
|--|---|
| <b>1. Menu key</b>   | <b>2. Number Increase key/Up key/Common Sound Velocity Switch key</b> |
| <b>3. Cancel key/ Sound Velocity Measurement &amp; Thickness Measurement Mode Switch key</b> |   |
| <b>4. Right Digit Selection key</b>  | <b>5. Instrument Power key</b>  |
| <b>6. Number Decrease key/Down key/Data Save key</b>   | <b>7. Confirm key</b>   |
| <b>8. Calibration key</b>  | <b>9. Left Digit Selection key</b>                                    |

# Interface Display



1. Material and sound velocity value    2. Thickness value    3. Folder    4. Probe frequency  
 5. Thickness unit    6. Battery level



Backlight intensity; Medium (The backlight intensity can be adjusted to weak, medium, or strong via the left and right digit selection keys)



Press the "Sound Velocity Measurement & Thickness Measurement Mode Switch key" to enter this interface. You can improve accuracy by setting the thickness of the measured object to perform a reverse measurement of sound velocity.

# Setting Interface

**AlarmUse OFF:** Enabling this function allows you to set the upper and lower alarm limits. When the measured value exceeds the set parameters, the machine will sound a buzzer alarm.

**Up Alarm:** Upper Alarm Limit

**Low Alarm:** Lower Alarm Limit

**Auto OFF 3 min:** The time can be adjusted within the range of 0~9 through the left and right digit selection keys. The automatic shutdown can be set to 0 minutes to deactivate.

Press the confirm button to view saved test data.



1	5920 m/s	4.00 mm
2	5920 m/s	4.00 mm
3	5920 m/s	4.00 mm
4	5920 m/s	56.14 mm
5	0 m/s	0.00 mm
6	0 m/s	0.00 mm

# Setting Interface

**Unit mm:** Use the left and right digit selection keys to switch between metric and imperial units.



**Langue EN:** Language EN (Language English) Use the left and right digit selection keys to switch between Chinese and English or other customized languages.

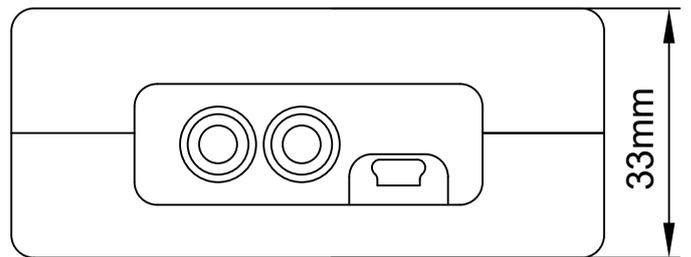
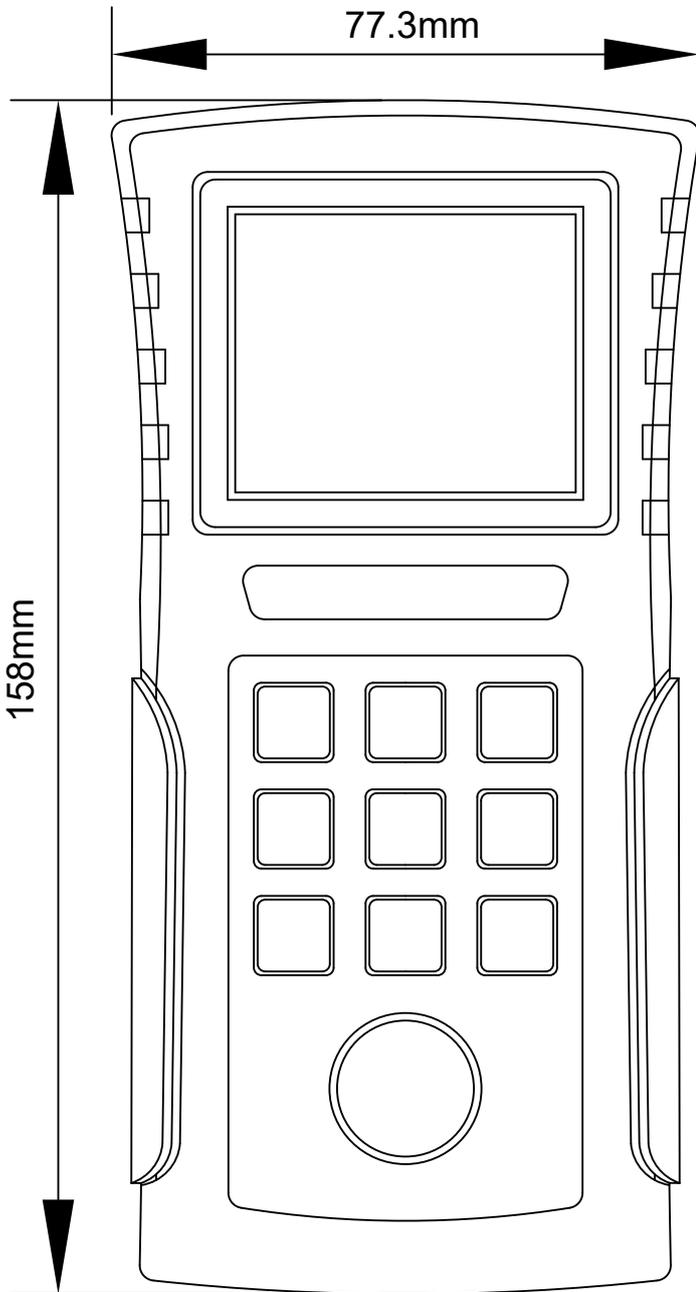


## PRO SIZE 5Mhz

The standard configuration is a 5Mhz standard probe. Users can use the left and right digit selection keys to switch between 2Mhz, 5Mhz, 7Mhz, and 10Mhz according to the different probes used



# Instrument Dimension



# Technical Parameters

<b>Measuring Range</b>	0.75~600mm(Determined by the probe)
<b>Resolution</b>	0.01mm
<b>Measuring Unit</b>	Optional mm/inch
<b>Languages</b>	English/Chinese
<b>Measuring Precision</b>	When the measuring range is 0.75~99.99, the resolution is 0.01, and the allowable error is $\pm 3\%H + 0.04$ .
	When the measuring range is 100.0~600.0, the resolution is 0.1, and the allowable error is $\pm 5\%H + 0.04$ .
	Note: H is the measured thickness
<b>Sound Speed Adjustment</b>	1000~9999 m/s
<b>Calibration Function</b>	Features probe zero point and two-point calibration functions
<b>Data Storage</b>	Capable of storing 3000 sets of thickness measurement data (measurement values and sound velocity values only) and 3000 sets of parameter datasets (including measurement values, instrument settings, and other parameters)
<b>Communication Interface</b>	USB
<b>Audible And Visual Alarm</b>	Upper and lower limit prompts (can be set according to the thickness of the workpiece being measured)
<b>Minimum Thickness Capture Capability</b>	Capable of capturing minimum thickness value
<b>Workpiece Surface Temperature</b>	-10~60°C
<b>Measuring Cycle</b>	6 times/second in single point measurement, 20 times/second in scanning mode
<b>Lower Limit For Pipe Measurement</b>	$\Phi 20\text{mm} \times 3.0\text{ mm}$ (5Mhz probe); 15mmX2.0 mm (7Mhz probe)
<b>Indication Error</b>	less than $\pm 0.1\text{mm}$
<b>Calibration</b>	4.0 mm(Steel)
<b>Power Source</b>	AAA alkaline battery 1.5V (4 pieces)
<b>Working Time</b>	Continuous operation up to 250 hours (without backlight)
<b>Weight</b>	245g
<b>Working Environment</b>	Operating temperature -20°C to +50°C Storage temperature: -30°C to +70°C Relative humidity $\leq 90\%$ ; The surrounding environment should be free from intense vibration, strong magnetic fields, corrosive media, and severe dust.
<b>Dimensions</b>	145mmx74mmx32mm

# Standard Delivery

Name	Qty	
Main unit	1 pc	
Standard Probe(5MHz)	1 pc	
Couplant	1 bottle	
ABS Instrument case	1 pc	
Document	1 copy	
AAA Size Alkaline batteries	4 pcs	
Data cable	1 pc	

# Optional Delivery

Name	Qty
Large diameter probe (2.5MHz)	
Large range probe (2MHz)	
Micro-diameter probe (7MHz)	
High temperature probe (5MHz)	
High temperature couplant	

Web: [www.mikrosize.com](http://www.mikrosize.com)

10

Email: [mikrosize@mikrosize.com](mailto:mikrosize@mikrosize.com)