Mikrosize®

iFlaw-100

Ultrasonic Flaw Detector

Video

Contact us

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Product Features and Application

Product Features

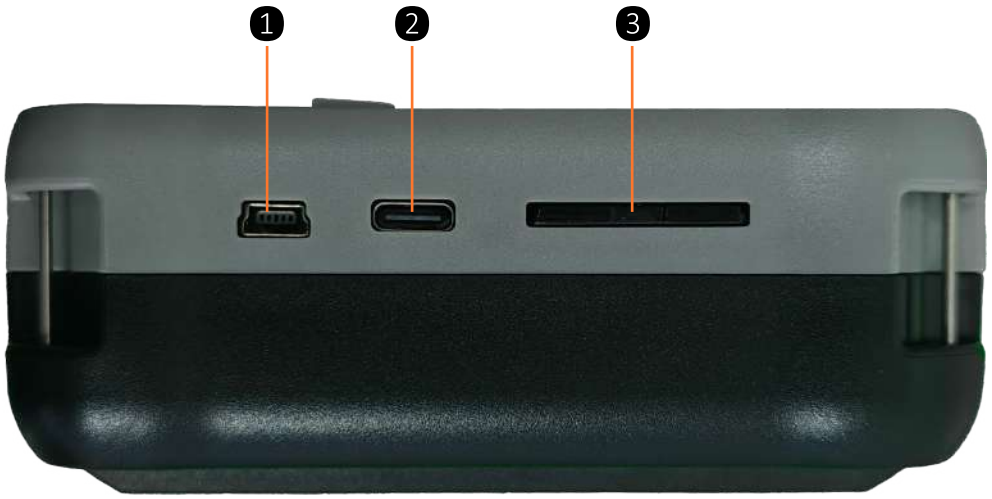
- The body is lightweight and suitable for one-handed operation.
- PD65W fast charge + 12 hours long battery life.
- 5.0-inch IPS high-definition display with a brand new UI interface.
- Support full-screen touch, quick gesture operation, virtual keyboard, easy to use
- With DAC, AVG, automatic gain, peak memory, color half-span, B-scan and other professional functions.
- Including Chinese and English switching, data export to SD card, online upgrade, screen capture and many other practical functions.

Product Application

- Mechanical manufacturing: Testing mechanical equipment components and large castings and forgings
- Petrochemical industry: Used for equipment such as pipelines and pressure vessels
- Aerospace: Flaw detection for key components of aircraft and spacecraft
- Steel structure inspection: Inspect welds, bolt connections, and other parts
- Concrete structure inspection: Exploring defects such as cracks and voids
- Track inspection: Flaw detection of steel rails
- Vehicle detection: Detecting key components of trains, subways, and other vehicles
- Special equipment testing: Flaw detection for boilers, elevators, etc

Instrument Interface

1. Power switch **2. Transmitting interface** **3. Receiving interface**
4. B-scan trolley encoder interface



1. Mini USB data interface **2. Charging interface/Type-C data interface**
3. SD card slot

Button Function

1. Shuttle key **2. Status indicator light (Green light: Normal operation, Red light: Charging)**
3. Menu key **4. Function keys/Shortcut keys**

1. Basic Menu **2. Calibration Menu** **3. Curve Menu**
4. B-scan Menu **5. System Menu**

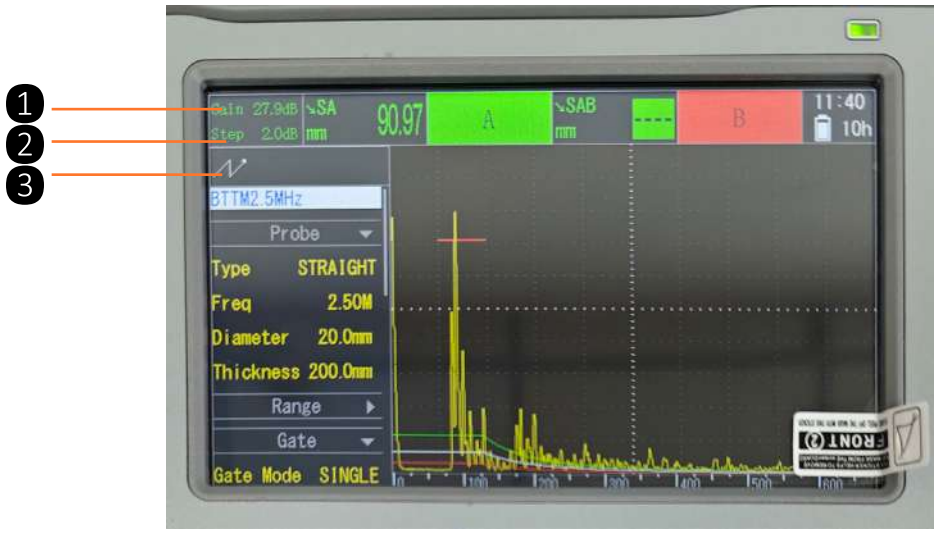
Button Function

1.Back Key **2.Confirm Key** **3.Decrease Key**
4.Automatic Peak Adjustment Key

1.Peak Memory Key **2.Full-screen Display Key** **3.Freeze Key**
4.Increase Key

1.Back Key: Long press to "restore" channel shortcut
2.Confirm Key: Long press to "create" a new channel shortcut
3.Decrease Key
4.Automatic Peak Adjustment Key: Automatically adjusts the echo amplitude, default is 80%
5.Peak Memory Key: Long press for gate expansion function
6.Full-screen Display Key: Long press for screenshot function
7.Freeze Key: Short press to hold the waveform on the screen. During freeze mode, long press to save. To continue testing, press the Freeze button again; Long press for recording function.
8.Increase Key

Interface Display



1.Current Total Gain Value **2.Current Gain Step** **3.Status Display**

1.Parameter Menu **2.Measurement Value Display**
3.Current Time and Battery Level Display

Curve Display

DAC Curve

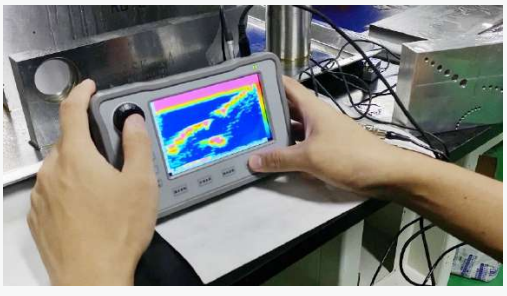
- The DAC curve includes RL (rejection line), SL (quantification line), and EL (evaluation line)
High quantitative accuracy;
- Adjustable detection sensitivity;
- More precise defect localization;
- The comparability of the results is strong;
- Convenient quality control

AVG Curve

- AVG curve only supports the use of straight probes
- Accurate quantification of defects
- High detection sensitivity
- Defect localization assistance
- Good reproducibility of results
- Widely applicable
- The AVG curve can provide distance information between the defect and the probe. By measuring the arrival time of the defect echo and combining it with the known sound velocity, the position of the defect can be calculated;

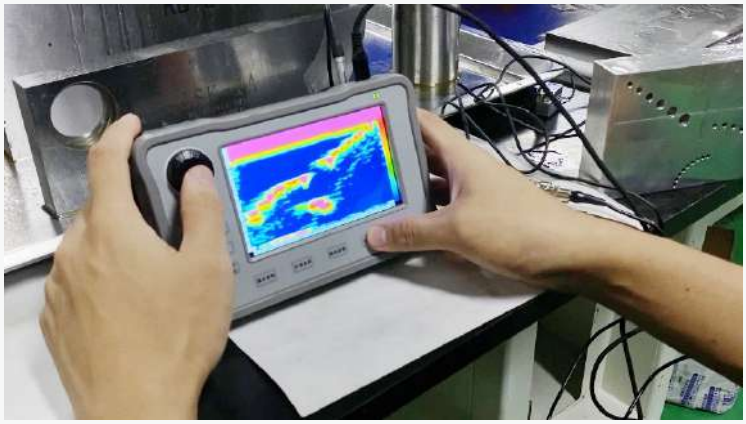
B-scan image

- Only supports generating B-scan images in straight probe mode
- 2D image display
- Accurately determine the depth position of the defect in the tested object
- Defects will appear in different grayscale or brightness levels in the image, making it easier for inspectors to identify and judge
- Wide applicability



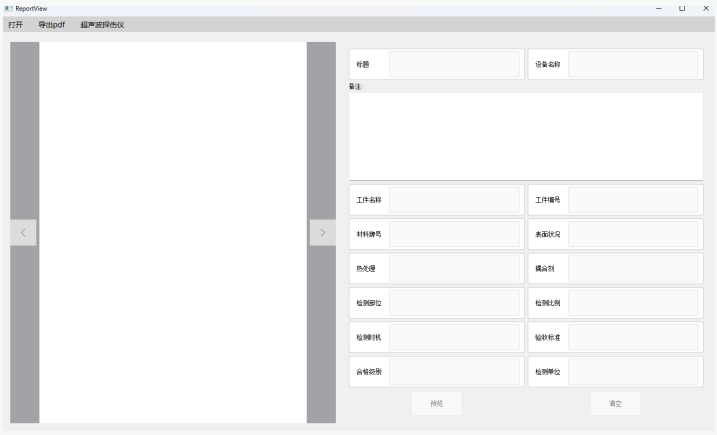
B-Scan Image

Only supports generating B-scan images in straight probe mode



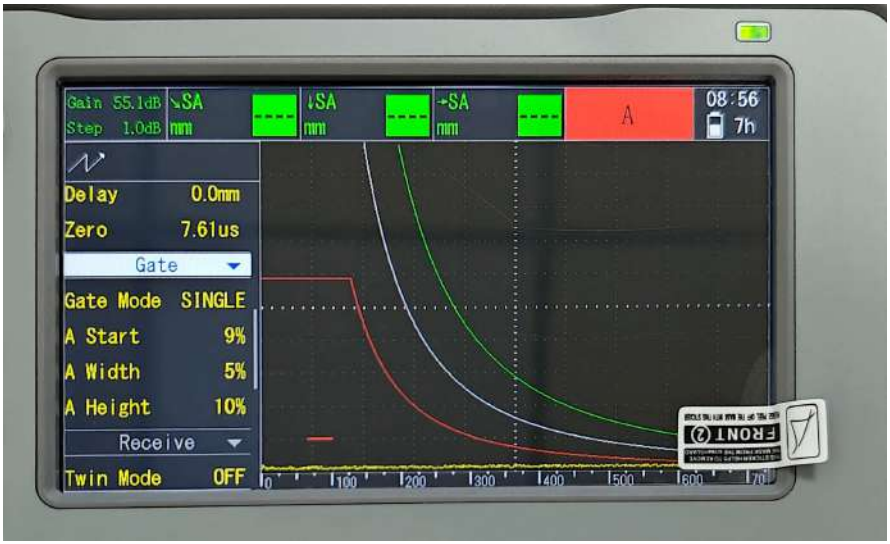
2D image display; Accurately determine the depth position of the defect in the tested object; Defects will appear in different grayscale or brightness levels in the image, making it easier for inspectors to identify and judge; Wide applicability

Data Storage



Set the USB flash drive mode on the instrument; connect it to the computer via the Type-C data cable interface, and you can use the software to edit the content of the inspection report results. PDF files can be generated.

Gate Setting



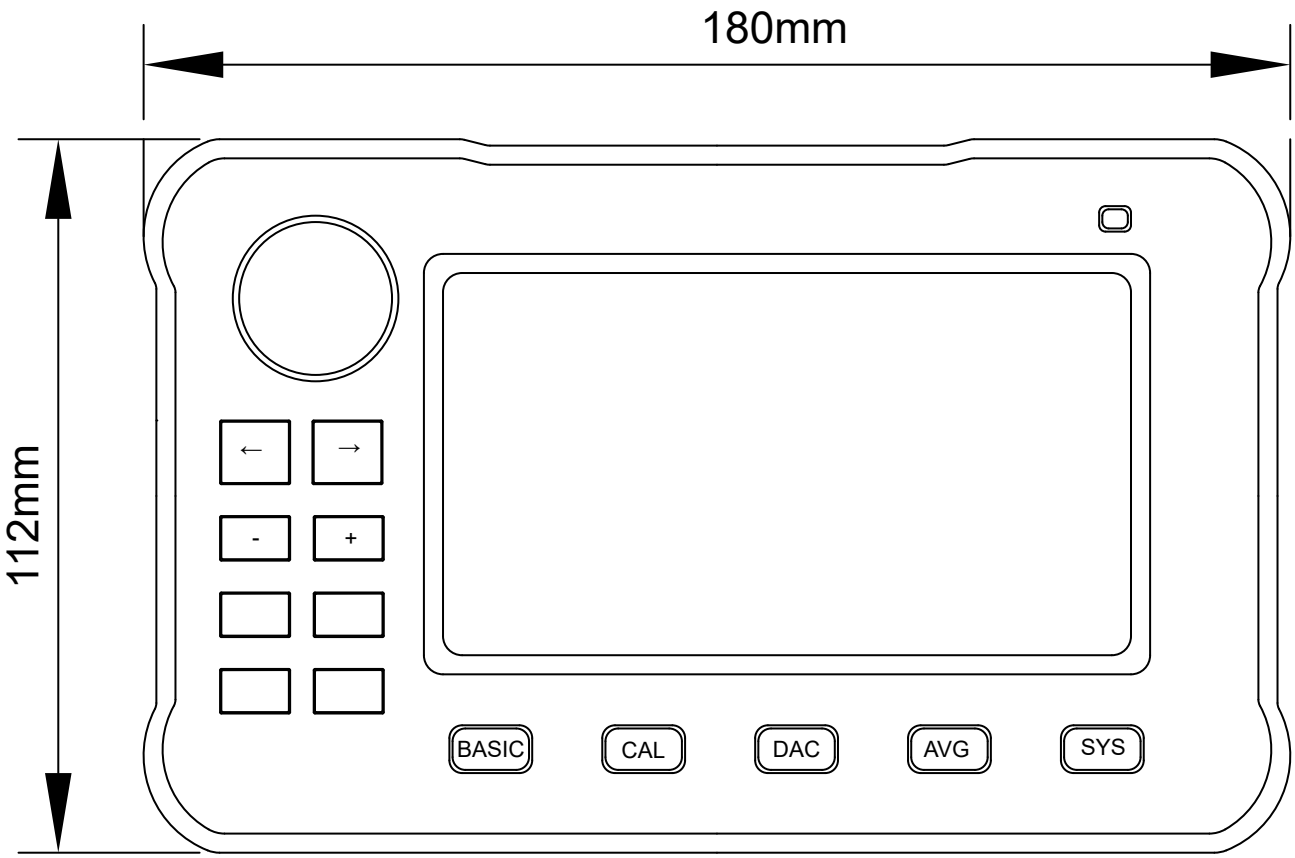
Single or double gates can be set in the basic menu.

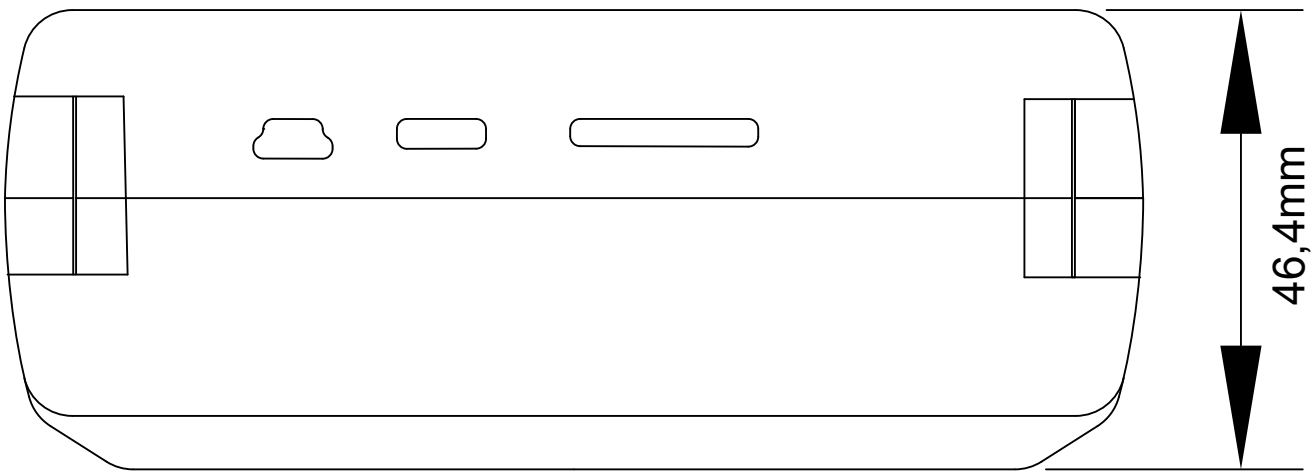
Double gates can enhance the accuracy and flexibility of detection, improve detection efficiency, and facilitate data analysis and recording.

Double gates can be flexibly set according to different inspection standards and workpiece characteristics. By adjusting the width, height, and position of the gates, they can adapt to defect detection of different sizes and shapes.

Double gates can simultaneously monitor multiple areas, enabling quick location of potential defects. This allows flaw detection personnel to complete inspections of workpieces in a shorter period, thereby improving inspection efficiency.

Instrument Dimension





Technical Parameters

Bandwidth	0.1MHz~20MHz
Gain	120dB, pace 0.1dB, 0.6dB, 1dB, 2dB, 6dB
Wave filter	Broadband,1M,1.25M,2.5M,5M,10M,15M,1M-5M
Sampling rate	Hardware sampling rate 100MSPS, equivalent sampling rate 400MSPS
Detection mode	Full wave, positive half wave, negative half wave, RF, envelope
Detection range	20 meters (longitudinal wave carbon steel),pace 100mm, 10mm, 0.1mm
Sound velocity range	250~16000m/s
Pulse mode	Sharp pulse, square wave, dual-square wave
Pulse voltage	25V~300V, 25V pace
Pulse width	0ns~500ns continuously adjustable,10ns pace
Emission damping	Strong(100Ω),weak(1000Ω)adjustable
Pulse frequency	Automatic or manual, automatic range(200Hz-1KHz), manual range(0-10KHz)
Probe channel	200 groups, supporting operations such as creating, previewing, deleting, renaming, overwriting, and restoring
Gate alarm	Gate A and B alarm, lost wave/incoming wave
Gate mode	Independent gate A, gate B
Measurement mode	Peak, Front edge, J Front edge
Quantitative mode	DAC curve, AVG(DGS)curve
Flaw detection standards	AWS D1.1/D1.5, NB/T 47013, GB/T 29712, GB/T 11345
Saving content	Single frame, multi-frame recording (≤ 500 frames), screenshot, B-scan screenshot
Auxiliary functions	Professional B-scan, automatic gain, peak memory, waveform freezing, channel management, gate alarm, gate expansion, automatic gate, full screen touch, virtual keyboard, color half span, quick screenshot, flaw reports, channel import/export
Display screen	High definition 5.0 inch 800×480 IPS_LCD
Probe interface	Dual LEMO-00 C5
Output interface	Type-C1, MINI USB
Input interface	Type-C2(B scan trolley)
B-scan imaging	Supports up to 700 sets of A-scan synthesis, with the highest resolution φ 2mm
Data storage	16GB SD card
Charger	65W_PD fast charging ,standard Type-C interface(100~240V, 50~60Hz)
Size	183mm×113mm×45mm
Weight	700g, including battery but not rubber sleeve
Language	Chinese, English, Russian
Unit	Metric system, imperial syetem
Battery	7.4V 8000mAh Lithium battery, 12 hours of battery life
Operation temperature	-10℃~55℃
Relative humidity	(20~95)%RH
Resolution ratio	30dB(Metrological performance requirements: ≥26dB)
Dynamic range	35dB(Metrological performance requirements: ≥26dB)
Sensitivity margin	55dB(Metrological performance requirements: ≥42dB)
Vertical linearity	1.20%(Metrological performance requirements: ≤6%)
Horizontal linearity	0.15%(Metrological performance requirements: ≤2%)

Standard Delivery

Items	Qty	
Host	1	
Probe (high-precision straight probe, angle probe)	2	
Probe line	2	
Charger	1	
Power line	1	
User manual	1	
Certificate	1	
Warranty card	1	
SD card(8G)	1	

Optional Delivery

Items	Qty	
SD card(16G, 32G, 64G)	1	
B-scan trolley	1	
Power bank	1	