# DIGITAL ULTRASONIC FLAW DETECTOR (BASIC TYPE)
# CODE UFD-T680

- The all-aluminum metal shell is strong and durable, and the electromagnetic shielding performance is very good
- Tempered glass panel, extremely hard, wear-resistant and scratch-resistant
- Full-digital multi-color high resolution (640×480 pixels) TFT LCD display
- 4 operating interface styles can be selected according to the environment
- Real-time screenshots of all pages and flaw detection reports, and save them as BMP pictures to U disk
- Export the flaw detection report as a PDF file
- Unique Fn multifunction key design
- There is no limit of the number and duration of video recording through U disk
- Memory of 500 channel files to store calibration setups and probe parameter
- Memory of 1000 wave report files to store A-Scan wave and settings
- Two fully independent gates offer a range of measurement options for signal height or distance using peak triggering
- Can choose to set the incoming wave alarm or lost wave alarm, accompanied by LED light display
- Selectable frequency ranges (automatically set by the instrument) to match probe for optimum performance
- The unique automatic gain adjustment and gain scanning function make flaw detection fast and accurate





straight-beam probe
(included)



angle-beam probe
(included)



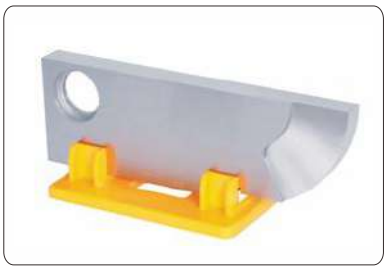
USB disk
(included)



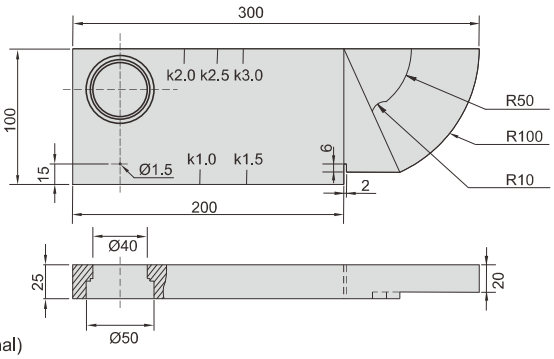
couplant
(included)

## FUNCTIONS

| | |
|---|---|
| **Flaw detection standard** | Built-in common flaw detection standards, direct call, convenient and fast |
| **Auto calibration** | Automatic calibration of probe zero offset, probe angle (K value) and material velocity |
| **Peak hold** | Compare frozen peak waveforms to live A-Scans to easily interpret test results |
| **Flaw locating** | Live display sound-path, projection (surface distance), depth, amplitude |
| **Flaw discrimination** | Automatic flaw sizing using AVG or DAC, speeds reporting of defect acceptance or rejection |
| **Flaw sizing** | The equivalent dB value of defects or equivalent size of defects are displayed in real time |
| **Curved surface correction** | Used for flaw detection of curved workpiece, it can display the circumferential position of defects in real time |
| **DAC/AVG** | The curve is automatically generated, and the sampling points can be compensated and corrected. The curve automatically floats with the gain, automatically expands with the detection distance, and automatically moves with the delay time. It can display the AVG curve of any aperture |
| **AWS D1.1** | Choosing this standard can reduce manual calculations and improve detection efficiency |
| **Weld diagram** | Support V type, T type, L type and other weld types, acoustic path navigation real-time display, weld and defect location real-time display, scaling, easy to locate defects |
| **Automatic rating** | Select different AWS standards, automatically calculate the rating of defects and display |
| **Crack height** | The crack height is measured and calculated automatically by the diffracted wave at the end |
| **Gate magnify** | Spreading of the gate range over the entire screen width |
| **Continuous record** | Video recording and playback |
| **Echo coding** | Display 1~9 echo display area in different colors, used to analyze the defect position |
| **Scan freeze** | Display freeze holds waveform and test distance data |
| **Peak mark** | Capture and mark the peak in real time |
| **B scan** | Intuitively display the defect shape of the workpiece and the detection result is more intuitive |



Unit: mm




calibration block (optional)

## SPECIFICATION

| | |
|---|---|
| Measuring range | 0~15000mm |
| Working frequency | 1.0~20MHz |
| Material velocity | 100~20000m/s |
| Repetition frequency | 20~2000Hz |
| Dynamic range | ≥36dB |
| Vertical linearity | ≤3.0% |
| Horizontal linearity | ≤1.0% |
| Resolving power | >42dB |
| Sensitivity leavings | >65dB |
| Suppression | 0~80% |
| Noise | ≤10% |
| Probe selection | single crystal probe, dual crystal probe, penetrating probe, climbing probe |
| Pulse energy | 100V, 200V, 250V, 300V, 350V, 400V, 450V, 500V (selectable) |
| Pulse width | 30ns-510ns |
| Probe damping | 50Ω, 150Ω, 250Ω, 500Ω (selectable) |
| Rectification | positive half wave, negative half wave, full wave, RF |
| Gates | two independent gates controllable over entire sweep range |
| Interface | USB 2.0 |
| Operating temperature | -10~50°C |
| Relative humidity | 20~95%RH |
| Power | build-in rechargeable battery |
| Size | 263×170×61mm |
| Weight | 1.92kg |

## STANDARD DELIVERY

| | |
|---|---|
| Main unit | 1 pc |
| Single-element straight probe UFD-T60 | 1 pc |
| Single-element angle probe UFD-T61 | 1 pc |
| USB cable | 1 pc |
| Couplant | 1 bottle |
| Probe connecting cable | 1 pc |
| USB disk | 1 pc |
| Power adapter | 1 pc |

## OPTIONAL ACCESSORY

| | |
|---|---|
| calibration block | UFD-CSK1 |

## SPECIFICATION OF PROBE

| Code | Frenquency | Size | Probe type | Transducer sensor angle |
|---|---|---|---|---|
| UFD-T60 (included) | 2.5MHz | Ø20mm | Single-element straight probe | 90° |
| UFD-T61 (included) | 4.0MHz | 8x9mm | Single-element angle probe | 60° |
| UFD-T62 (optional) | 5.0MHz | Ø10mm | Dual-element straight probe | 90° |
| UFD-T63 (optional) | 5.0MHz | Ø10mm | Single-element straight probe | 90° |
| UFD-T64 (optional) | 4.0MHz | 8x9mm | Single-element angle probe | 45° |
| UFD-T65 (optional) | 4.0MHz | 8x9mm | Single-element angle probe | 70° |

Note: Other types of the probes are available