SVK Electronics
NDT Systems & Solutions

Easy to use Ultrasonic Thickness Gauge with a measurement range of 0.8 - 300 mm, A-Scan, B-Scan, AGC and TFT Display

UDT20

Portable Ultrasonic Thickness Gauge

• POWERFUL • LIGHT & PORTABLE • A-SCAN • B-SCAN
• HIGH MEASUREMENT ACCURACY • HIGH RESOLUTION

Navigation
Ease of Navigation
makes UDT20 an ideal
For NDT testing

Product Overview

UDT 20 is a Highly accurate ultrasonic thickness gauge with **A- and B-scans**. Real signals on the screen make it possible to evade typical errors in thickness measurement using ultrasonic testing and improve measurement accuracy.

This thickness gauge implements various capabilities of thickness inspection - high-precision measurement of the time or passing through the "zero" ("zero-cross") or between "echo-echo" signals, measurement of the thickness under coatings, etc.

With the **thickness gauge UDT-20**, it is possible to use any ultrasonic transducers with frequency from 0, 5 to 15 MHz, both “single element” and “dual element” types.

Quick Specs

- Measurement range : 0,3 - 500 mm
- Calibration range : min.: 0 - 7.2 mm max.: 0 - 500 mm (steel)
- Discreteness : 0.001 - 0.01 - 0.1
- Measurement accuracy : 0,01 mm
- AGC (Automatic Gain Control) : up to 30 dB
- Delay : 0 - 168 us
- Gain : 92 dB, in increments 0.5 dB
- TCG : 0.1 - 10 dB/us
- Frequency range : 0.5 - 20 MHz (-6 dB)
- Display : TFT; 43 x 58 mm; 240 x 320 pixels
- Memory : 100 sensor settings, 250 testing results with A-scan, 250 testing results with B-scan, 100 measurement files up to 50x50 values
- Power supply : built-in Li-Po battery
- Battery life : no less than 12 hours
- External power supply : 220 V AC / 5 V DC
- Operation temperature range : from -25 to +55 °C
- Dimensions (H x W x L) : 148 mm x 64 mm x 25 mm
- Weight : 180 g

Ergonomic Design
for One-Handed operation

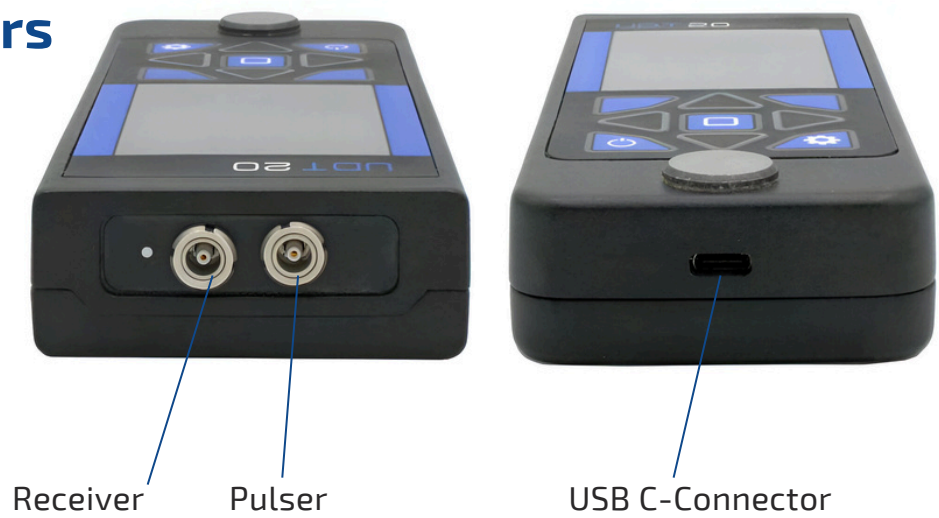
Menu Structure

1. Move through the Menu items
2. Select a Parameter
3. Adjust the Parameter value
4. Activate the Selected parameter
5. On/Off
6. Settings

Ease of operation and reliability

This thickness gauge combines the latest achievements in analog and digital electronics, usability, ergonomic design and high reliability.

Connectors



Delivery Set

Built-In Li-Pol Battery

Transport Bag

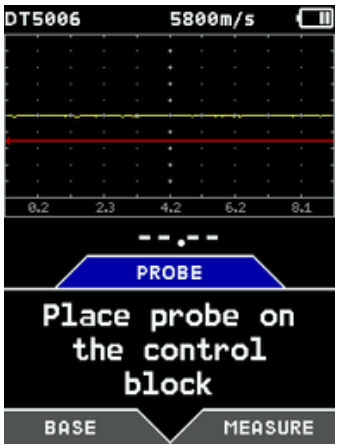
1 x 2Lemo00 — 2Lemo00 cable transducers

PC Software

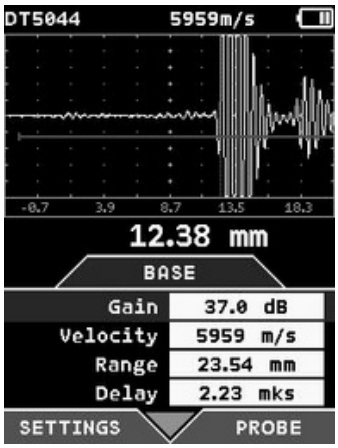
Protective Bag with Blind and Belts

Power Supply (5 V / 220 V)

2 x Transducers



Transducer probe calibration

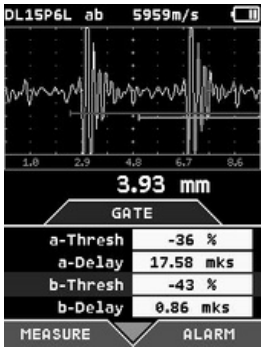


Gain adjustment

Specifics

- High-contrast and easy-to-read at any angle frost-resistant TFT display
- Powerful Li-Pol battery with up to 12 hours battery life
- Protective bag for field operation
- Transducer database that allows user to load all the necessary settings with a single button
- Built-in USB Type-C interface
- Two independent monitor gates
- Time Correction Gain (TCG)
- Automatic Gain Control AGC
- Large memory of settings and testing reports.

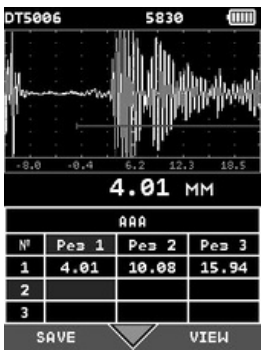
Specifics



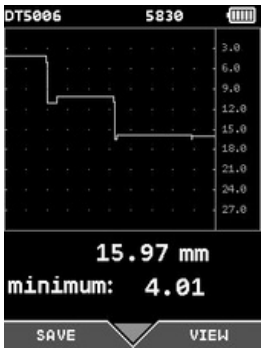
Highly accurate “zero-cross” measurement, two independent gates and the latest low-noise receiver enable precision measurements with combined transducers in “echo-echo” mode, including under various coatings.

In the setting mode, the whole range of capabilities is available for adjusting the gain of the receiving path, AGC, TCG, pulser and receiver parameters, probe delay calibration and sound velocity.

The "DIGIT" mode allows the user to remove unnecessary information from the screen, turning a technically advanced device into an easy-to-use control tool.



In the "TABLE" mode, the user can create any tabular matrix for the inspection of large-sized standard products by layout control points.



The B-scan protocol displays the real profile of the product with the locking of the minimum signal for the entire time of high power.

UDT20 Portable Ultrasonic Thickness Gauge

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Technical Specifications	
Measurement range	0,3 - 500 mm
Display range	**Min**.: 0 - 7.2 mm ; **Max**.: 0 - 500 mm (steel)
Data display resolution	0.001 - 0.01 - 0.1
Allowed Coating Thickness	Between the probe surface and the test object up to 10 mm in “echo-echo” mode
UT Speed Range	1000 - 9999 m/s
Automatic Gain Control	Up to 30 dB
Display delay	0 - 168 us
Gain	92 dB, in increments 0.5 dB
Time Corrected Gain (TCG)	0.1 - 10 dB/us
Frequency range	0.5 - 20 MHz (-6 dB)
Visualization	A-scan, B-scan, digital values
Monitor gate	Two independent gates
Alarm System	Luminous and sonorous
Time interval measurement	0 - echo; echo - echo
Max. num of Measurements	200 (Per Sec.)
Transducers	Single element transducer; dual element probe/transducer
Probe Calibration	By built-in sample or by any sample specified by the operator
Sound velocity calibration	According to the thickness specified by the operator
Measurement modes	Scan mode, “freeze” mode
Non-original transducers	Any ultrasonic transducers can be used if their parameters were previously saved by PC software
Measurement	Calibration according to several samples (2 - 10) {Measurement at an unknown sound velocity}

General Specifications	
Display	TFT with adjustable brightness and color set 43 x 58 mm; 240 x 320 pixels
Color Sets	Standard color, luminescent, monochrome (for working in bright sunlight)
Brightness	5 - 100%, in increments 1%
Display lights auto-off	30 sec., 60 sec., 120 sec., off
Auto-Off	3 min., 5 min., 10 min., off
Date Time Setting	Yes
Memory	100 probe settings ; 250 testing results with A-scan; 250 testing results with B-scan; 100 measurement files up to 50x50 values
Interface	USB Type-C
Language	English
Transducer connectors	2 x Lemo 00
Power supply	Built-in Li-Po battery
Battery life	Not less than 12 hours
External power supply	220 V AC / 5 V DC
Operation temperature	From -25 to +55 °C
Dimensions (H x W x L)	148 mm x 64 mm x 25 mm
Weight	180 g