

# T-SCAN 300 & 300DL

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## Handheld Ultrasonic Material & Coating Thickness Gauges



The latest thickness gauge from Silverwing, the T-scan 300 is a combined material and coatings thickness gauge. Unlike other systems the T-scan 300 is capable of measuring through painted surfaces and giving both the thickness of the paint and the base metal at the same time. Options within the software allow the operator to view the results as either simple digits or as a B-scan cross sectional image of the inspected area.

The T-scan 300DL has all the features of the T-scan 300 but also has a massive data storage facility. The 32 MB of RAM allows storage of 210,000 thickness measurements, in either grid or sequential format, or 16,000 B-scan graphical images including the settings for each image.

### FEATURES:

#### Measurement modes:

- Pulse-Echo,
- Pulse-Echo with Temperature Compensation
- Pulse-Echo with Coating
- Echo-Echo
- Coating Only

#### Automatic:

- probe zero
- probe recognition,
- temperature compensation
- gain control

Audible/visual alarm with hi and lo limit settings

Time based B-Scan feature for cross section material scans

Data Storage up to 210 000 measurements

Windows PC software included



### Physical

Weight:  
13.5 ounces  
383 gram

Size:  
2.5 W x 6.5 H x 1.24 D inches  
63.5 W x 165 H x 31.5 D mm

Operating Temperature:  
14 to 140F (-10 to 60C)

Case:  
Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed).

Keypad:  
Membrane switch pad with twelve tactile keys

Data Output:  
Bi-directional RS232 serial port. Windows® PC interface software

Display:  
1/8in VGA grayscale display (240 x 160 pixels). Viewable area 2.4 x 1.8in (62 x 45.7mm). EL backlit (on/off/auto)

### Ultrasonic Specifications

Measurement Modes:  
Coating Off: Pulse-Echo (P-E)  
Coating On: Pulse-Echo Coating (PECT)  
Temp Comp: Pulse-Echo Temperature Compensation (PETP)  
Thru-Paint: Echo-Echo (E-E)  
Coating Only: Coating (CT)

Pulser:  
Dual square wave pulsers

Receiver:  
Dual receivers - manual or AGC gain control with 110dB range

Timing:  
Precision 25 MHz TCXO with single shot 100 MHz 8 bit ultra low power digitizer

### Power Source

Three 1.5V alkaline or 1.2V NiCad AA cells

Typically operates for 150 hours on alkaline and 100hours on NiCad (charger not included)

Auto power off if idle 5 min

Battery status icon

### Measuring

Range:  
Pulse-Echo Mode (P-E) - (Pit & Flaw Detection) Measures from 0.025 to 19.999 inches (0.63 to 508 mm)

Pulse-Echo Coating Mode (PECT) - (Material, Coating, Pit & Flaw Detection): Material: 0.025 to 19.999 in (0.63 to 508mm). Coating: 0.001 to 0.100 in (0.01 to 2.54mm)

Pulse-Echo Temp Comp Mode (PETP) - (Pit & Flaw Detection): Auto temperature compensation - measures from 0.025 to 19.999in (0.63 to 508mm)

Echo-Echo Mode (E-E) - (Thru Paint & Coating) Measures from 0.100 to 4.0in (2.54 to 102mm). Range will vary +/- depending on the coating

Coating Only Mode (CT) - (Coating Thickness) Measures from 0.0005 to 0.100in (0.0127 to 2.54mm). Range will vary +/- depending on the coating

Resolution:  
+/- 0.001in (0.01mm)

Velocity Range:  
0.0492 to 0.5510in/ms  
1250 to 13995 meters/second

Single and Two point calibration option for material & coating, or selection of basic material types

Units:  
English & Metric

### Display

Large Digits - Standard thickness view. Digit Height: 0.700 inches (17.78 millimeters)

B-Scan - Time based cross section view. Display speed of 15 secs per screen Scan Bar Thickness - 6 readings per second. Viewable in B-Scan and large Digit views

Repeatability Bar Graph - Bar graph indicates stability of reading

Feature Status Bar - Indicates features currently active

### Data Logger T-Scan300DL

Log Formats:  
Grid (alpha numeric)  
Sequential (auto identifier)

Cell Content:  
Graphics On: 16,000 readings, B-Scan image & gauge settings for every reading

Graphics Off: 210,000 readings (coating, material, min & max)

OBSTRUCT to indicate inaccessible locations

Memory:  
32 megabit non-volatile ram

### Transducer

Transducer Types:  
Dual Element (1 to 10 MHz)

Locking quick disconnect "00" LEMO connectors

Standard 4 foot cable

Custom transducers and cable lengths available for special applications

### Certification

Factory calibration traceable to national standards