

Technology Driven
Not Operator
Dependent



SILVERWING
Specialist Inspection Equipment

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Not Operator
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Technical Specification - Scanner

Dimensions:	Scanning Head - L - 110 mm W - 87 mm H - 56 mm Base - L - 104.5 mm W - 84 mm H - 116 mm
Weight:	1.15 Kg
Wheel Probe:	TWP25 5MHz Dry Coupled wheel probe
Encoder:	Dual Axis

Technical Specification - UT Module (UT400)

Dimensions:	L - 260 mm W - 160 mm H - 60 mm
Weight:	2.0 Kg
Battery:	Removable 10.8 Volts 4.6 Amp - Upto 12 hours operation from full charge
Charger:	Upto 4 hours charge from flat
Umbilical Cable:	2 metre
Pulse Voltage:	-400V
Pulse Shape: Spike	Spike
Receiver Gain:	0 - 80dB in 1dB steps
Filters:	Wideband (0.5 - 18MHz) 0.5 - 4.0 MHz 2.0 - 8.0 MHz 4.0 - 16.0 MHz 6.0 - 24.0 MHz
Sample rate:	50MHz
Waveform Length:	32768 samples (excl delay)
Transducer Range:	1.0MHz - 15MHz
Transducer Mode:	Single or dual via software
Computer Interface:	USB 2.0
Connectors:	Encoder - 25 way D type socket UT - 2x BNC (Tx & Rx) Data - IP68 USB 'B' Charger - 1.5 Amp / Tamiya Connector

ThetaScan



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Manual Ultrasonic C-scan Corrosion Mapping System



The ThetaScan is a cost effective, portable ultrasonic C-scan imaging system which has been developed to carry out C-scan corrosion mapping on ferrous plate and curves.

The system is designed to be operated both on flat plates and curved surfaces with a diameter of 300mm or more.

Key Features

- Dry Coupled Wheel Probe
- Battery Operated
- Light Weight & Portable
- Export Results to Excel

The Thetascan utilises Silverwing's TWP25 "Dry-Coupled" wheel probe which completely eliminates the need for a water supply allowing the system to be used in even the most remote locations.

The Thetascan system continuously records thickness measurements as the scanning head is moved over the inspection surface. During a scan, thickness information is presented as an A-scan trace, a digital thickness measurement and a C-Scan image. Inspection results can be viewed in real time in the field or recalled for post inspection analysis at a later date.

The system comprises of a manually operated Thetascan scanning head, linear encoded extending arm, base unit, portable ultrasonic module, and a netbook or tablet computer.

Scanning Head:

The handheld scanning head incorporates Silverwing's dry-coupled wheel probe which is constructed from a twin element 5Mhz transducer, mounted inside solid tyres. The wheel probe tyres are made from a unique material that is able to transmit the Ultrasonic sound wave from the transducer into the material under test in the same way as a liquid or gel couplant. The scanner also incorporates magnetic wheels which hold the scanner to the inspection surface.



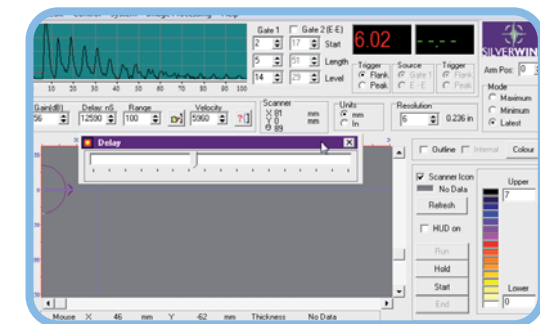
The ThetaScan scanning head is attached to an extending arm which in turn is attached to a rotating base unit. The base unit is fitted with rare earth magnetic feet to attach the system to the inspection service. The extending arm and rotating base unit are fully encoded allowing the Thetascan software to continuously combine arm extension and arm rotation measurements to accurately plot the probe position, this eliminates problems associated with encoder wheel slippage.

Portable Ultrasonic Module - UT400:

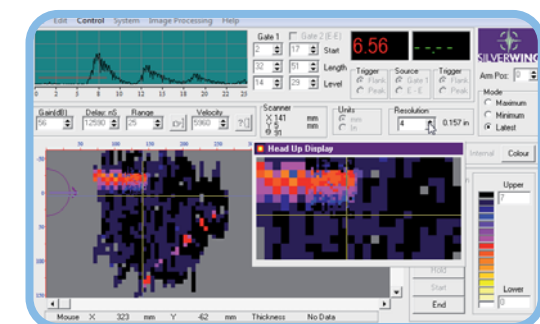
The battery powered ultrasonic module processes the UT and encoder information from the scanner and base unit. The ultrasonic module is powered by an internal 12 volt battery which will operate continuously for upto 12 hours from a fully charged battery. Supplied with the unit is a shoulder bag making it easier for the operator whilst on site.

ThetaScan Software

The ThetaScan software is optimised for the netbook computer and has standard UT flaw detector controls, simplifying training and operation requirements. All controls such as gain, delay, timebase and gate adjustments are on the same screen as the active A-scan display and the C-scan image. The easy to use defect sizing tools also allow the export of recorded C-Scan images directly into other Windows software packages such as Word or Excel using the cut and paste functions. Saved thickness measurements can also be exported as .csv files which can be handled using spreadsheet programs such as Microsoft Excel.



A-Scan Setup



Head Up Detailed Display