

UT/x – SpotWeld Phased-Array Inspector

ScanMaster UT/x is the new member in our product offerings for the automotive industry

The Phased Array architecture of ScanMaster UT/x offers new capabilities for SpotWeld inspection, including ultra-fast:

- Measure of nugget size
- Measure of nugget area
- Advanced new technology for classification of nugget quality

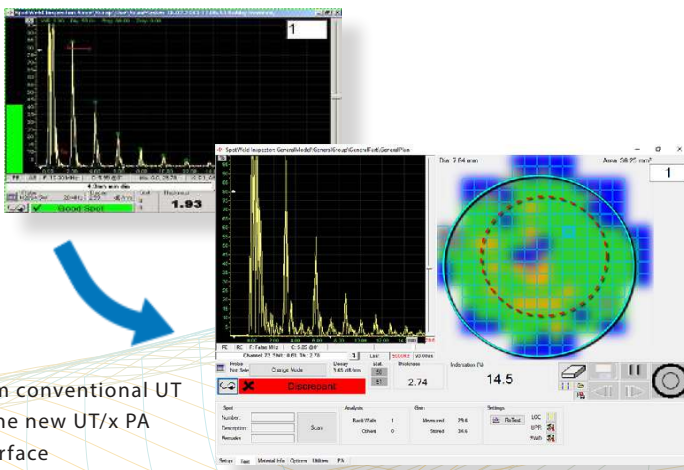


ScanMaster UT/x provides the following unique combination of advantages:

- Fast and reliable inspection (less than 1 sec. per spot)
- 209 virtual elements' PA probe inspection or single element probe using the same hardware platform and software
- Dual delay line: flexible membrane for indent welds or hard delay line for quicker inspection of flat surfaces
- Efficient scan plan preparation and on-the-fly automatic setup
- Support for the migration of existing ScanMaster plans
- Utilization of ScanMaster's patent-registered unique technology

Incorporating many successful features of the existing ScanMaster SWI software (e.g., plan preparation wizards and quick inspection run), ScanMaster UT/x has an intuitive, user-friendly interface that allows operators and supervisors to easily access both basic and advanced setups.

Backward compatibility ensures that current ScanMaster SpotWeld users can adopt the new solution quickly and cost-effectively by migrating most data to the new ScanMaster UT/x.



From conventional UT to the new UT/x PA interface

ScanMaster UT/x uses 15 MHz PA matrix transducer incorporating 61 separate elements with a 1mm pitch. It includes a built-in water path for ultimate UT performances and flexible membrane to compensate different weld indentations

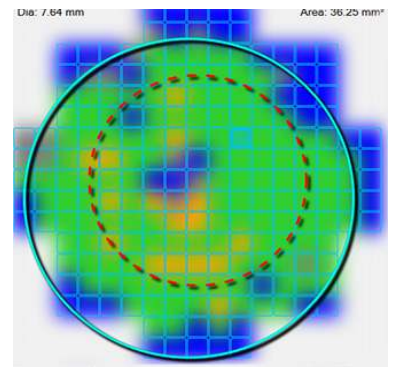


ScanMaster PA Probe

Current SpotWeld users will enjoy these additional benefits:

- Similar scan plan-tree structure for quick navigation
- Quick and easy migration of plans to save setup time
- Similar application navigation to minimize the learning curve
- Ability to use an existing ScanMaster SpotWeld single element probe on the same UT/x instrument
- Similar probe handling

Using ScanMaster's field-proven sophisticated algorithm, each single element returns an autonomous measurement and decision during inspection, the information collected from all elements is gathered, and the combined data is integrated into a single automatic decision, with area and diameter measurements.



Matrix Weld Representation

Main specifications:

- Driven by M2M's Mantis Portable PA instrument
- Size (L x W x H): 320mm (12.6 in) x 220mm (8.66 in) x 100mm (3.94 in)
- Screen size: 8.4"
- Weight: 4.4 kg (9.7 lb.)
- Battery time: 4 hours (hot swappable battery)
- Number of elements in probe: 61 @ 209 virtual elements
- Frequency: 15MHz
- Phased array pulsers:
 - Negative square pulse, width: 35ns to 1250ns
 - HT voltage: 12V to 90V (with 1V step)
- Phased array receivers:
 - Input impedance: 50 Ω
 - Frequency range: 0.4 to 20MHz
 - Max. input signal: 2Vpp
 - Gain: Up to 120dB (0.1dB step)
 - Cross-talk between two channels < 50 dB



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