

Phased-Array Transducer for Composite Material Ultrasonic Testing

Sensor Networks, Inc (SNI) introduces a new phased-array transducer designed to inspect composite material or flat metal plate.

The WheelArray is a unique tool and ultrasonic test fixture used to increase inspection productivity of large surface areas associated with composite materials and metal plates. WheelArray is offered in five test frequencies and the wheel can be replaced or swapped out by the end-user in the field.

Prior to inspection, a small quantity of water or other suitable couplant needs to be sprayed on the test area.



Coverage

Nominal UT inspection width (active area) of ~ 2" (51 mm) and continuous length

Convenience

Light weight and ergonomic design for operator comfort · Interfaces with any PAUT instrument

Unique

The unit's encoder wheel can interface with any test instrument for easy B- or C-scan imaging · Quick and easy wheel replacement

- Translucent tire for easy identification of air bubbles
- Compliant tire for better coupling to test material
- Ergonomic comfort grip
- Accommodates composites up to ~ 1.97" (50mm) thick
- Includes 118" (3m) long cable, longer upon request
- Tool weighs 3.8lbs (1.7kg) filled
- P68 magnetic rotary encoder
- Optional front encoder

part numbers

Complete WheelArrays	Frequency (MHz)	Elements	Pitch (mm)	Elevation (mm)	Sound Path (mm)	Beam Width (mm)
00-013242	1	32	1.6	12	25.4	51.2
00-013241	2.25	64	0.8	6.4	25.4	51.2
00-013076	3.5	64	0.8	6.4	25.4	51.2
00-013073	5	64	0.8	6.4	25.4	51.2
00-013081	10	64	0.8	6.4	25.4	51.2

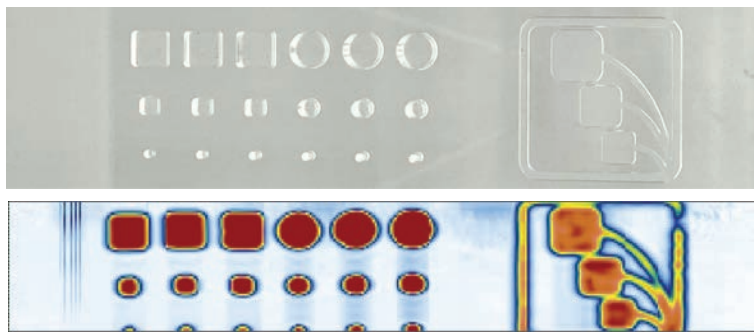
*Available with ZPAC or IPEX connectors. Others available upon request.

replacement wheel part numbers

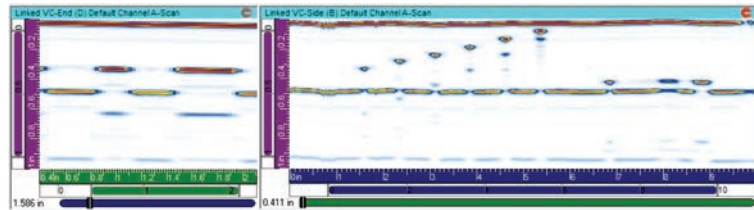
Replacement Array Assemblies	Frequency (MHz)	Elements	Pitch (mm)	Elevation (mm)	Sound Path (mm)	Beam Width (mm)
00-013233	1	32	1.6	12	25.4	51.2
00-013232	2.25	64	0.8	6.4	25.4	51.2
00-013228	3.5	64	0.8	6.4	25.4	51.2
00-013227	5	64	0.8	6.4	25.4	51.2
00-013229	10	64	0.8	6.4	25.4	51.2

*Available with ZPAC or IPEX connectors. Others available upon request.

*These spare/replacement parts include the fluid-filled wheel, transducer, cable, and connector sub-assembly.

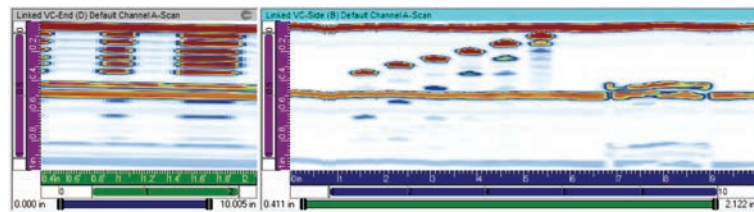


C-Scan from Soft Gate between Front Surface and Backwall



Single Plane End View

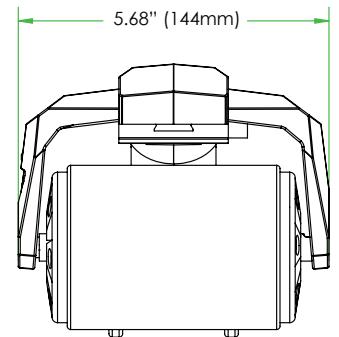
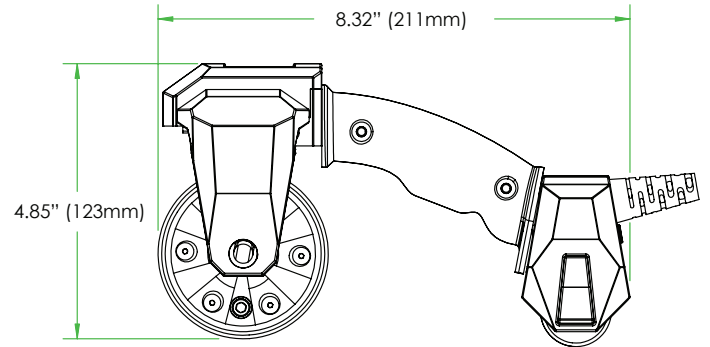
Single Plane B-Scan



Merged End View

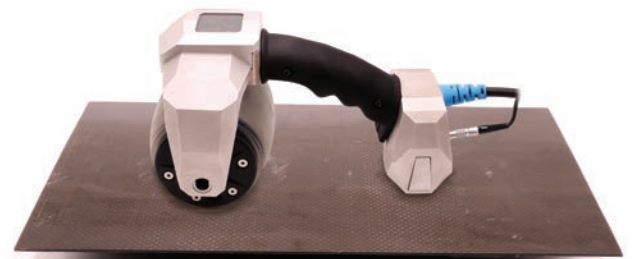
Merged B-Scan

specifications



customization options

Frequency	Cable length
# elements	Connector type
Pitch	Encoder position



WheelArray on a Composite Stiffener