

Ultrasonic Immersion Scanners

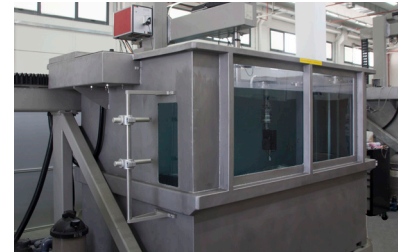
A wide range of high precision, high productivity immersion scanners incorporating conventional and phased arrays technology to provide solutions for a variety of applications

Features

- Fully integrated imaging systems, including ultrasonic electronics, scanning mechanics, axes motion control and data acquisition and processing software
- Multi-channel usc-100b programmable ultrasonic instrument with excellent near surface resolution. Approved by all major manufacturers for C-scan inspection of forged jet engine discs and other applications
- Full integration of phased array capability for multi-zone and multi-angle inspection using annular, linear and matrix phased array transducers
- Powerful teach-in and scanning software allowing for inspection of complex 3D parts
- Off-line part programming by importing of part model from CAD file
- B- and C-scan data processing and analysis tool kit. Includes a reach library of tools for analysis and evaluation of scan results
- Advanced algorithms for automatic immersion evaluation of jet engine discs
- Comprehensive inspection report, standard and customized versions
- High-precision, high-speed, cantilever- or bridge-based mechanics, with closed loop servo motor control, including encoder feedback
- High-resolution, gimbal-gimbal motorized manipulator with protective electro-mechanical breakaway, which prevents damage to manipulator, transducers and part under inspection in case of collision
- High-performance turntable with self-centering manual or motorized chucks
- Continuous motion or two-position lifting device for easy loading and unloading of parts
- Provisions for robot-based automatic loading and unloading of parts



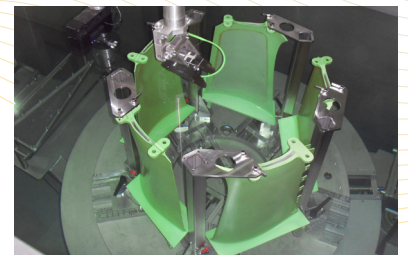
Jet Engine Discs



Phased Array Disc Inspection



Composites



Blades and Vanes



Bars and Billets



Non-ferrous Plates



Bearings

Standard Immersion Scanners – Performance Highlights^{1,2}

| Product | Motion Envelope Linear Axes | | | Manipulator ³ | | Max. Part Diameter mm (inch) | Turntable Capacity kg (lbs) | Water Height ⁴ mm (inch) |
|----------------------------|--------------------------------|-------------|-------------|--------------------------|-------|------------------------------------|-----------------------------------|---|
| | X mm (inch) | Y mm (inch) | Z mm (inch) | A deg | B deg | | | |
| LS-50 Series | | | | | | | | |
| LS-50 | 750 (30) | 400 (16) | 450 (18) | ±38 | ±112 | 400 (16) | 80 (176) | 300 (12) |
| LS-500 Series | | | | | | | | |
| LS-500-1000 ^{5,6} | 1,000 (40) | 600 (24) | 700 (28) | ±38 | ±112 | 600 (24) | 200 (440) | 430 (17) |
| LS-200 Series | | | | | | | | |
| LS-200s | 1,200 (48) | 600 (24) | 600 (24) | ±38 | ±112 | 600 (24) | 200 (400) | 450 (18) |
| LS-200L-1200 ⁵ | 1,770 (69) | 920 (36) | 1,000 (40) | ±38 | ±112 | 1,200 (48) | 1,000 (2,200) | 820 (32) |
| LS-200LP-1200 ⁷ | 1,400 (55) | 920 (36) | 1,000 (40) | ±38 | ±112 | 1,200 (48) | 1,000 (2,200) | 780 (30) |
| LS-200L-1500 ⁵ | 1,800 (70) | 1,100 (43) | 1,000 (40) | ±38 | ±112 | 1,500 (59) | 1,000 (2,200) | 780 (30) |
| LS-200LP-1500 ⁷ | 1,680 (66) | 1,100 (43) | 1,000 (40) | ±38 | ±112 | 1,500 (59) | 1,000 (2,200) | 740 (29) |
| DS-200 Series | | | | | | | | |
| DS-200i-1500 ⁷ | 1,700 (66) | 1,500 (59) | 1,000 (40) | ±38 | ±112 | 1,500 (59) | 2,000 (4,400) | 1,000 (40) |
| DS-200i-1800 ⁷ | 1,700 (66) | 1,500 (59) | 1,000 (40) | ±38 | ±112 | 1,800 (70) | 2,000 (4,400) | 1,000 (40) |

¹ Please consult product data sheet for complete information

² Custom tank size and turntable capacity available upon request

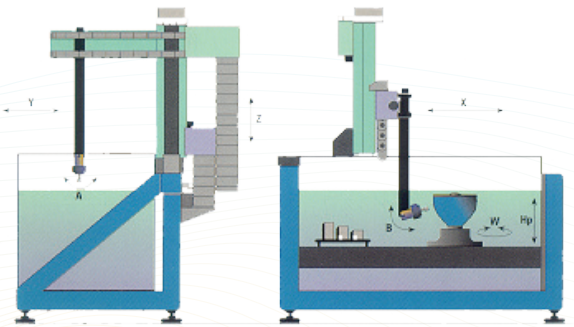
³ Additional optional swivel axis (U) is available, motion range $\pm 185^\circ$

⁴ Measured from turntable chuck raisers

⁵ Optional motorized two-position lift platform

⁶ Length expandable to 1,500mm (59inch); 2,000mm (79inch) and higher

⁷ Includes motorized continuous motion lift platform



Options

- Full integration of phased array capability
- 3D contour following for scanning parts of complex geometry
- Motorized lifting device (lift platform), two-position or continuous motion
- Motorized chucking for quick part clamping
- Bar rotator for inspection of bars, tubes and billets
- Application-tailored multi-transducer probe holder
- Mechanical or ultrasonic surface tracking device
- Interface to loading/unloading robot for automation of inspection
- Transportable version with quick installation and ready for operation (SKAN200, SKAN500 Series)

CORPORATE OFFICES

ScanMaster Systems (IRT) Ltd.

5b Atir Yeda St., Industrial Park. Kfar Saba, 4464305, Israel
 Tel: + 972 9 7791990
 Fax: + 972 9 7791989
 E-mail: info@scanmaster-irt.com
 Web site: www.scanmaster-irt.com

ScanMaster (IRT), Inc.

319 Garlington Road, Suite B4 Greenville, SC 29615, USA
 Tel: + 1 864 288 9813
 Fax: + 1 864 288 9799
 E-mail: info@scanmaster-irt.com
 Web site: www.scanmaster-irt.com