

Ultrasonic Immersion Scanners

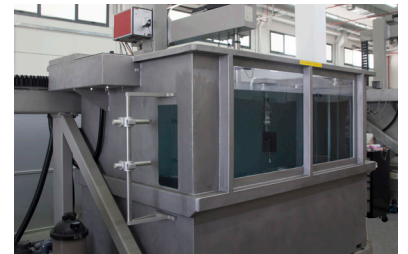
A wide range of high precision, high productivity immersion scanners incorporating conventional and phased arrays technology to provide solutions for a variety of applications

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



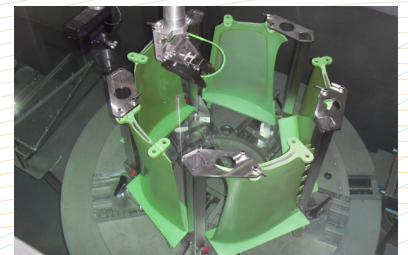
Jet Engine Discs



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

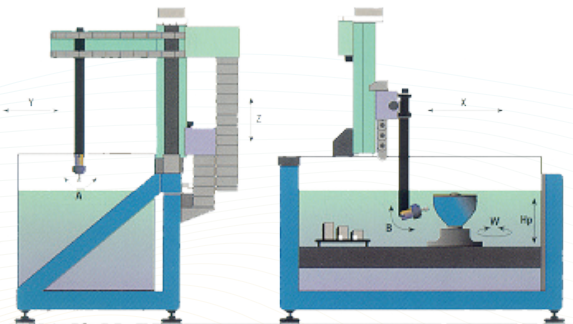
³ Additional optional swivel axis (U) is available, motion range ± 185°

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)

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