MULTI-AXIS UT NDT PRODUCT OVERVIEW

FROM BILLET TO BLADE – ONE SYSTEM, EVERY AXIS.

PVA TePla

VOLUME INSPECTION

MULTI-AXIS UT NDT

EVERY ANGLE. EVERY FLAW. FULL CONFIDENCE.

When one scanning plane isn‘t enough, defects slip through. Multi-Axis UT NDT adds contour-following and rotational axes to inspect the whole part at high resolution — reliably, repeatably, without damage.

The Multi-Axis Industrial UT NDT System is a high-performance ultrasonic inspection platform designed for complex, industrial-scale components. With configurable multi-axis motion, advanced pulser-receiver instrumentation, and multiple scanning modes, it enables precise detection of internal defects and thickness variations in diverse materials. Ideal for contour-following, billet inspection, and large or irregular geometries, the system integrates robust hardware with comprehensive time- and frequency-domain measurement capabilities for reliable non-destructive evaluation.

FEATURES AT A GLANCE

Multi-axis motion for any geometry
Coordinated X, Y, Z1/Z2 plus rotator, turntable and gimbal/swivel axes — with contour following that keeps the transducer aligned to curved, cylindrical and irregular parts.

Application-ready configurations
Custom scan fields, billet inspection and turntable inspection in acrylic or steel tanks — with safety light curtains and end-user signal processing, from R&D to full production.

Full frequency range: 1–200 MHz
Broadband pulser-receiver with high-dynamic-range digitizing (8-bit @ 1 GHz, 12-bit @ 250 MHz) — acoustic imaging that preserves sample integrity on production-critical, high-value components.

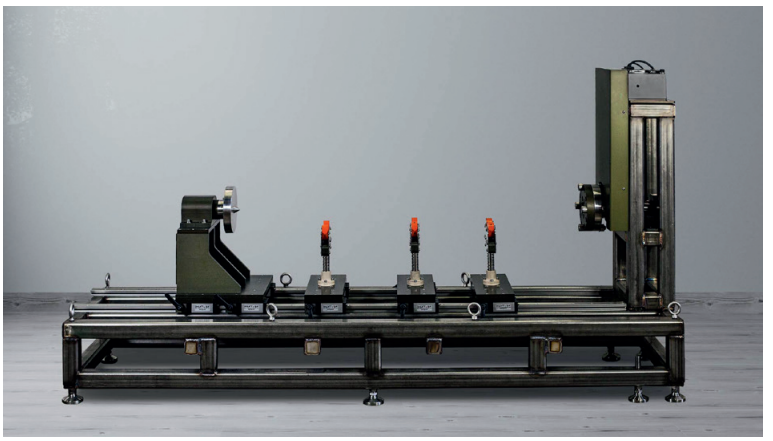
Multiple scanning modes
Pulse-Echo, Through-Transmission, A-Scan, B-Scan, C-Scan, TOF (Time of Flight), THK (Thickness) — all in one inspection.

TECHNICAL PARAMETERS

Every detail matters. The Multi Axis Industrial UT NDT is engineered for large-scale precision inspection — trusted across energy, aerospace & defense, automotive, semiconductor, and medical industries.

SPECIFICATIONS	
Technologies	Conventional & Phased Array Ultrasound
System Configurations	■ **XYZ** for flat parts ■ **Turntable** for cylindrical parts, tubes or pipes ■ **Gimbal Swivel** for complex curves or cones ■ **Rotator** for shaft-like parts
Scan Field	up to 1200 mm x 1200 mm x 800 mm (Scan, Step, Focus)
Axes	Scan, Step, Focus, Turntable, Rotator, Gimbal, Gimbal Gimbal, Gimbal Swivel
Contour following	1 to 500 MHz
ADC / Digitizer	12 bit 250 MHz with hardware TGC/DAC, 8 bit 1 GHz
Power Supply	120/240 VAC, 20 Amps, 1 PH
Weight & Dimensions	based on configuration
Water	Type 2 de-ionized
Tank Options	Acrylic or Steel Tank
Safety	Safety Light Curtains
Scan Modes	■ Pulse Echo ■ Through Transmission ■ Contour Following
Measurements	■ Time Domain ■ Frequency Domain ■ Max. Peak Amplitude ■ Positive and Negative Peak Amplitude ■ Time of Flight to Peaks & Edges ■ End-User Signal Processing

For cylindrical parts and complex shapes such as crank shafts and cam shafts.



Built to accommodate parts of any shape, including dual Z axes for precise control of through transmission of flat parts.

A small capacity overhead crane/hoist accessory makes loading and unloading parts easier. Overhead hoist and a clear acrylic tank allows users to handle parts and observe inspection process.

Entry line configuration for Universities and Research entities. Support pulse echo inspection and a simply yoke for through transmission inspection.

Custom built for billet inspection, can accommodate 4 meter long samples of different diameters.

PVA TePla AG | PVA TePla OKOS
7036 Tech Cir
Manassas VA 20109 USA
+1 703 880 3039
info-okos@pvatepla.com
www.pvatepla.com