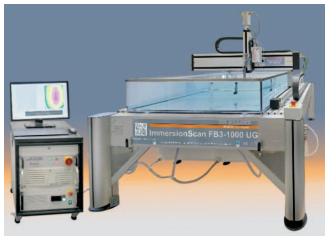
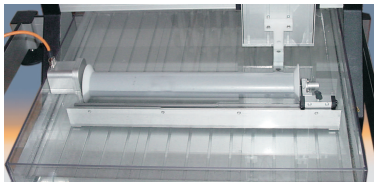
Scanners for Ultrasonic Imaging Systems



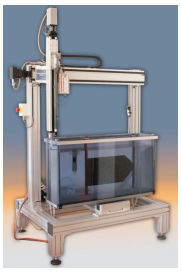
ImmersionScan FB3-1000 UG

Immersion technique
Scanning area: 1000x1200x250 mm³
Scanning speed: 375 mm/s
Resolution of the axis 0,05 mm
Good cost/performance ratio

Rotator for DeskTop Scanner

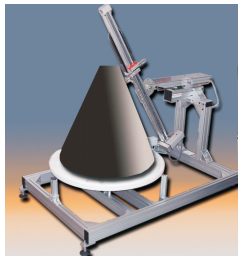


Testing of symmetrical components
Diameter up to 150 mm
Length up to 500 mm
Resolution 0,2 degree



ImmersionScan 1000

Scanning area: 500 mm x 1000 mm
Vertical arrangement of plates
Scanning speed up to 300 mm/s
Mechanical resolution 12.5 µm
Focus axis

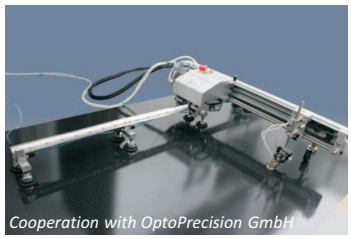


TaperScan

Tapered composite components, up to a height of 1100 mm (30 -90 taper degree)
Max. speed 20 rpm
Water split coupling
Component mass < 30 kg
Diameter< 900 mm

MUSE Z400

Mobile Ultrasonic Equipment
Scanning area: 434 x 275 mm
Scanning speed up to 500 mm/s
Mechanical resolution 40 µm
Local immersion technique

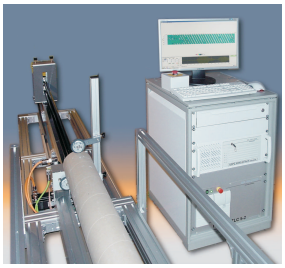


FlexiMuse

Mobile Ultrasonic Equipment
Scanning area 500 x 500 mm
Scanning speed up to 400 mm/s
Mechanical resolution 12.5 µm
Flexible index axis, can be enlarged
Local immersion technique

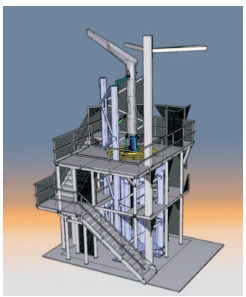
FlatScan

Air-coupled testing of flat components
Scanning area: up to 3000 x 2000 mm
scanning speed up to 500mm/s
Mechanical resolution 150 µm
Easy adjustment of the transducers
Through-transmission technique as well as pitch and catch



RobockScan

Air-coupled testing of tubs
Maximal component length: 2100 mm
Diameter range 200 to 1600 mm
Through-transmission technique



Special multi-axial systems for aerospace components

Inspection of complex shaped components
Air-coupled testing in through-transmission, 10 axes
High precision three dimensional and temporal synchronisation between all axes and the ultrasonic system USPC 4000 AirTech
Travelling distances: i. e. 5.7m x 4.0m x 2.5 m
Reference systems: Airbus Helicopters Donauwörth, Germany
Ruag AG, Zürich, Switzerland
Co-operation with Robo-Technology GmbH, Puchheim, Germany and Eugen Ostertag GmbH & Co KG, Laichingen, Germany

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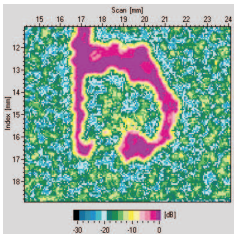
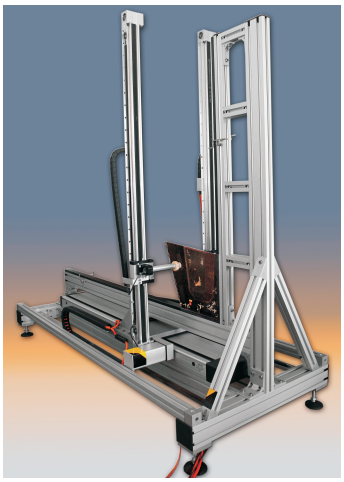
Ultrasonic-Highlights

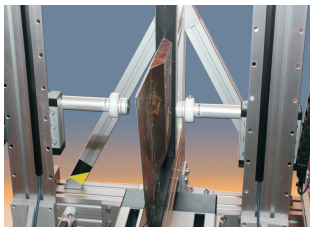
USPC 3060: High-Frequency Ultrasonics

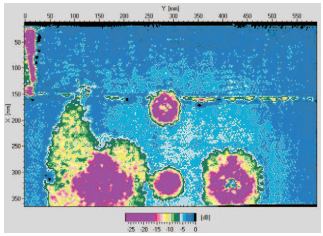


- **Frequency range up to 200 MHz**
- Extremely high resolution
- Inspection of thin components, ceramics, welded- and solder joints
- Automatic evaluation of flaw areas

USPC 4000AirTech: Air-coupled Inspections



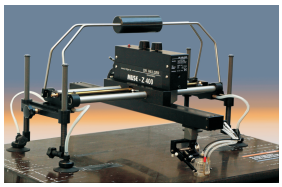


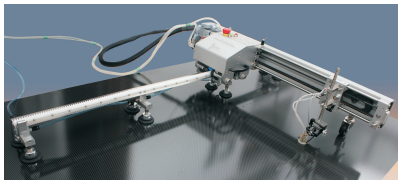


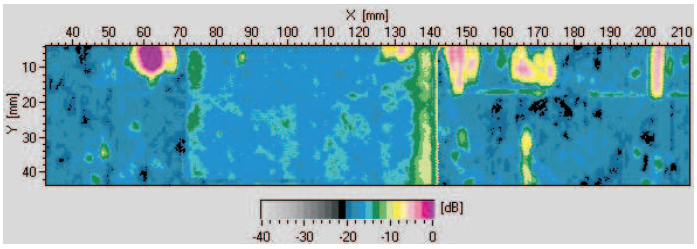
- **Testing without coupling agent, contactless**
- Also one-sided accessibility
- Applications: fiber reinforced plastics, foams, composites, building materials
- Detection and localization of flaws

MUSE - Z400 and FlexiMuse Mobile Utrasonic Technique

Cooperation with OptoPrecision







- **Local immersion technique gives high resolution**
- Motorized manipulator with suction pads
- In-Service-Inspections
- Automatic imaging in A-, B-, C-, D- and F-scans
- Scanning speed: 500mm/s

AirTech-Ultrasonic Robot Technology in Practice

Inspection of aerospace components

- **Testing of aerospace components**
- Cooperation with Robo Technology GmbH: USPC 4000AirTech interface with robots
- Examples: tail boom of the EC 145 in Donauwörth, Aerospace components, 20x4x6m, RUAG in Zurich

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