

# WENZEL ScanTec MobileScan3D

## The mobile CNC Measurement System

MobileScan3D assists you monitoring your production to ensure that all customer requirements or internal prerequisites are met. It supplies high quality data, accurate, reproducible and repeatable results. It is an reliable and effective tool for first article, prototype or lot inspection, as well inspection to CAD data.

### Automation

The key word to avoid and reduce errors introduced by the human intervention. MobileScan3D offers fully automated or semiautomated process in the production line or single measurements.

### Accuracy

High precise encoders on the hardware side and Geomagic PTB's approved software rounds MobileScan3D total accuracy.

### Repeatability

MobileScan3D surpassed R&R tests standards, with measurement repeatability better than 5 micrometers.

### Reliability

MobileScan3D hardware relies on individual components designed and implemented on approved coordinate measurement machines.

### Flexibility

MobileScan3D was desined for maximum freedom of choice and action in system operation. They interact, they decide how much automation they want, they perform process corrections and they use their creativity.



Sensor for larger measurement ranges



Sensor for smaller measurement ranges



Rotary table (optional)

# Features

## Reduced Accumulated Tolerance Without Use Of Markers

No registration of different scans necessary when using rotary axes. An (optional) integrated precise turntable to enable 360 degree movement of the object.

## Adjustable Laser Power

Software controlled laser power and sensitivity. For use on nearly any material, or color, and in any lighting conditions. Built-in algorithms adjusts laser power to object's surface.

## Scan Tasks Management

For partial or complete automation. Saves time and gives repeatability.

## Software Selectable Speed x Resolution

For adjusting the system to the inspection needs: more local detail and less speed or less local detail and faster measurements.

## Ultra Fine Resolution

Software controlled ultra-fine resolution even in larger measurement volumes; 0.01 mm to 0.25 mm depending on the scanning head model. 129'600'000'000 positions for two axes.

## User Interface

User friendly excel-like user interface or complete integration with PointMaster or Geomagic® product line. Customizable data entry screen. Direct feedback on machine control.

## Precise Data Acquisition

Precise data acquisition through servo controlled motors and high precision scales.

## Miscellaneous

Automatic scan data filtering as scan data is being captured.

Ordered Data Set scanning data avoids errors on evaluating thin material by transferring surface information in addition to points.

Parameterized edge detection preserves sharp contours.

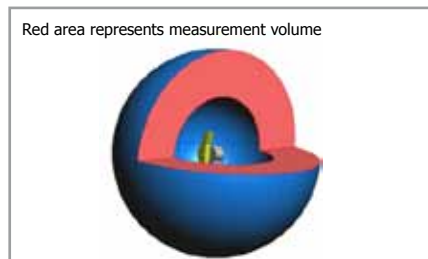
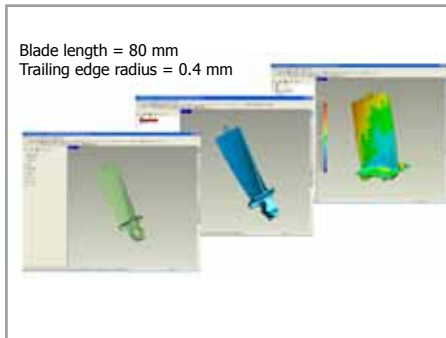
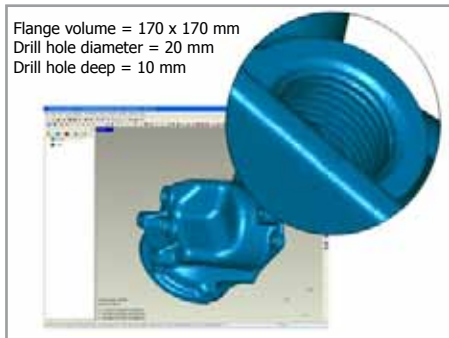
Adjustable noise reduction smoothes the surface.

Variable filter angle removes data not picked up accurately and improves surface data quality.

Uniform sampling is a scanning feature, not a filter.

## Area of Interest Definition

Real time volumetric area (XYZ) of interest (all data outside of this area is clipped).



Measurement range	Stand-off	Accuracy	Point distance middle of range	Line length
100 mm	290 mm	+/- 0.01 mm	0.04 mm	43 mm
400 mm	570 mm	+/- 0.05 mm	0.18 mm	185 mm
1000 mm	800 mm	+/- 0.15 mm	0.26 mm	270 mm

## Technical Data

**Mains** Commercial AC85 V to 240 V, 50 to 60 Hz  
**Interface** USB 2.0, FireWire (IEEE 1394)  
**Operating Temperature** 10-50°C, built in temperature sensor  
**Laser Line Sensor** Class II (CDHR) or class IIIa (IEC)  
**Line resolution** 512 or 1024 points/line  
**Measurement speed** from 25 to 100 lines/second  
**Swivel Axis (B+C)** 360° continuous (each axis)  
**Accuracy** 0.004°  
**Max. speed** 360°/sec

**Rotary Table** 360° continuous  
**Accuracy** 0.002°  
**Max. speed** 360°/sec  
**Max. weight** 150 kg

## WENZEL ScanTec GmbH

Mettendorfer Weg 24  
 91171 Greding  
 Phone: +49 (0) 8463 61 99 900  
 Fax: +49 (0) 8463 60 61 65  
 info@wenzel-scantec.com  
 www.wenzel-scantec.com