

Potential Applications

- Parts' geometry measurements
- Unique quality inspection and on-line process control
- Reverse engineering and digitizing
- Special purpose applications
- Measurement of soft materials
- Measurements in tough environments (Temperature, Vibrations, Humidity)

Measuring Capabilities

- Best Fit Accuracy (100 points)

1 μm at	1 sigma
2 μm at	2 sigma
- Best Fit Accuracy (30 points)

2 μm at	1 sigma
4 μm at	2 sigma
- Single Point Accuracy

6 μm at	1 sigma
12 μm at	2 sigma
- Single Point Repeatability

0.3 μm at	1 sigma
0.6 μm at	2 sigma
- Feature Repeatability

2 μm at	1 sigma
4 μm at	2 sigma
- Scanning Rate

50 Hz	(50 Measuring Points per second)
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- Stand off

50 mm	
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- Scanning Dynamic Range

± 5 mm	(10 mm)
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Calibration

Advanced calibration algorithm and real time adaptive control provides automatic calibration for different materials and surface finish types within the same scanning process.

Service and Support

- Easy set-ups
- Built-in diagnostics
- Solid state - No maintenance
- Reputable service and support centers

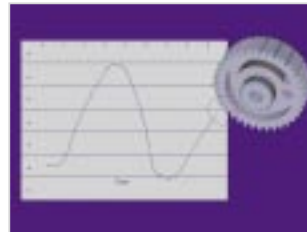
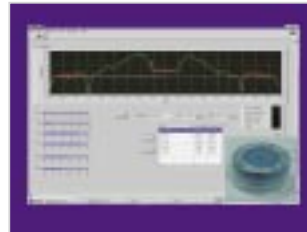
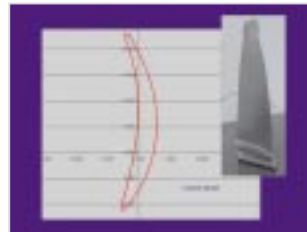
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NEXTEC
3D Inspection Technologies

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Dimensional Verification



Cross Sections



WIZprobe™



NEXTEC
3D Inspection Technologies

The **WIZprobe**™

WIZprobe is an advanced non-contact laser-scanning sensor for fast, accurate and highly reliable geometric measurements.

The probe has a standard PH-10 interface, can be easily fitted onto any CMM and can replace conventional mechanical touch probes.

The combination of the **WIZprobe's** unmatched accuracy and large dynamic range makes it very simple to set up the scanning program and to collect thousands of data points quickly and accurately.

Based on Nextec's proprietary optics and sophisticated image processing software, the **WIZprobe** handles a very large variety of materials and surface finish types, automatically performing self-calibration via **real time closed loop adaptive control**.

WIZprobe is also available as a stand-alone product with customized software packages for integration into any process control.

The **WIZprobe's** measurement accuracy is guaranteed over a very wide range of material types, surface finish, laser beam angles and environmental conditions.



WIZprobe Advantages

- Top Precision
- Small Size
- Real-Time Adaptive Control
- PH-10 Autojoint Connection

3D Inspection Technology



Non Contact

- No need to adjust stylus, all tasks are performed with a single probe
- Ability to measure soft or warm material
- Ability to measure sharp edges (cutting tools)

High Sampling Rate

- Fast measurements-Dramatically reduces measuring time compared with conventional touch probes
- Ability to control fast manufacturing process
- Ability to measure dynamic response distances and vibrations

Small Spot Size

- High lateral resolution
- Ability to detect geometry details down to 30 microns
- Ability to measure a rough surface, inaccessible to mechanical probes

Solid State Probe

- No moving parts and no wear
- Ultimate life cycle and high reliability
- Maintenance free
- Can be used in hostile environment

Major Components

- Patented non-contact optical probe
- Electronic controller and extensive software package
- Easily interfaced with any accurate XYZ motion system

Major Benefits

Superior Precision

- Ability to measure very tight tolerances and high precision parts
- Ability to measure a wide range of parts
- Ability to scan very shiny surfaces

Wide Dynamic Range

- Ability to use simple scanning patterns
- Quick set-up time
- No prior information on part geometry is required
- Automatically learns new surfaces to perform Reverse-Engineering