



ZeroTouch®

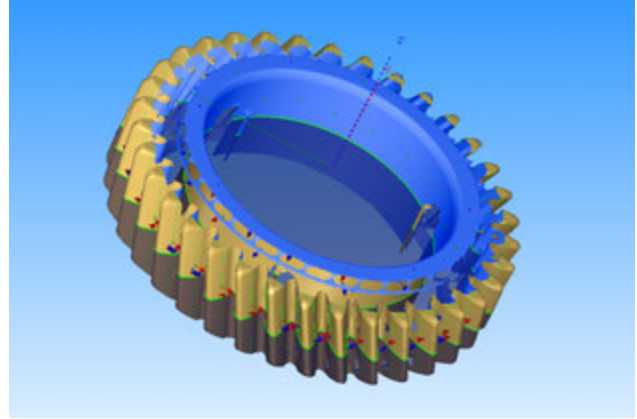
ZTG-2580

NON-CONTACT 3D GEAR INSPECTION SYSTEM

A high-speed, precision inspection machine for 100% near-line or inline gear inspections.

ZeroTouch® ZTG-2580 is a non-contact gear inspection system that generates a 3D point cloud, providing manufacturers with real-time metrology and inspection data to optimize production processes and improve ROI.

Measuring an Infinity of Involute



KEY BENEFITS

- Much faster inspection times when compared to traditional gear measurement technologies
- 100% inspection of gears and teeth geometries with measurement cycle times from 30 seconds per part
- Installed in the immediate vicinity of the production line
- Faulty gears stopped before going to final assembly
- Simple interface with manufacturing process through integrated loading and unloading robot
- Fast identification of production defects, enabling adjustment of upstream processes to reduce waste
- 3D inspection of complex geometries using multiple sensors

KEY FEATURES

- Captures dense precision point cloud data with speed and accuracy
- Advanced analytics integration with application specific tools
- Profile, helix, pitch, and runout measurements
- Surface defect detection and characterization capabilities
- Multiple laser line triangulation metrology sensors
- Real-time data capture and storage for SPC analysis

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ZeroTouch[®]

ZTG-2580

HIGH-SPEED PRECISION GEAR INSPECTION

SPECIFICATIONS

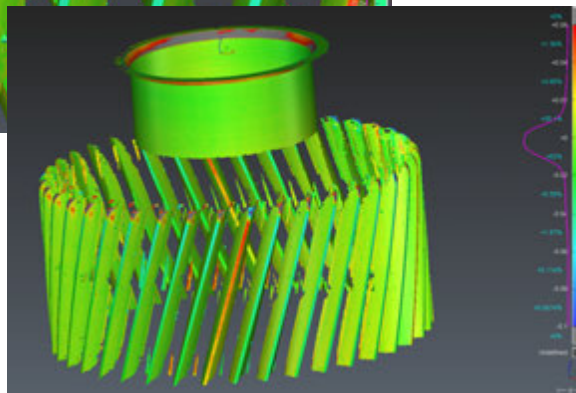
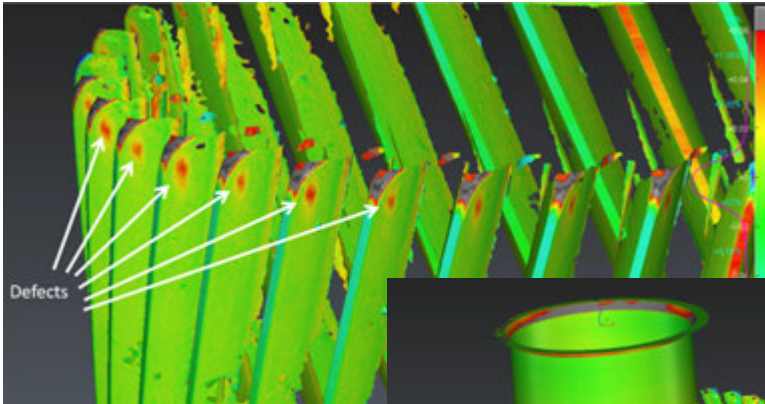
Gear Dimensions ¹	
External ring	80 mm max. diameter
Part height	Up to 25 mm
Inspection Speed	~30 seconds (typical cycle times)
Tolerances	5-10µm
Surface Defect Detection	50µm (minimum defect size)
Measurements	Profile evaluations ($F\alpha$ - $fH\alpha$ - $ff\alpha$ - $C\alpha$) Helix evaluations ($F\beta$ - $fH\beta$ - $ff\beta$ - $C\beta$) Pitch and roundness evaluations (Fp - fp - Fr) Diameter over balls (Mdk)
System Dimensions	2,000 x 1,000 x 2,000 mm (W x D x H)
System Weight	1,500 kg (3,300 lbs)

¹ Gear dimensions only reflect the current system. Systems for larger gear sizes are in development.

Multiple Non-contact Sensors



Surface Defect Detection



KEY INDUSTRIES



Aerospace



Precision Manufacturing



Automotive

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M E T R O L O G Y

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