



DWFritz ZeroTouch™

Non-Contact Multipurpose Metrology Platform

A precise, high speed metrology and inspection system for processing complex geometries in just a fraction of time versus a traditional CMM

The DWFritz ZeroTouch is a robust, shop floor-ready, non-contact metrology platform that captures millions of data points per second in just one scan, up to 10X faster than a traditional CMM. ZeroTouch utilizes a multisensor array for the rapid measurement of surface finish, color, gloss and complex geometries such as chamfers, knife edges, undercuts and bores to enable the precise inspection of the most intricate parts with low GRR.



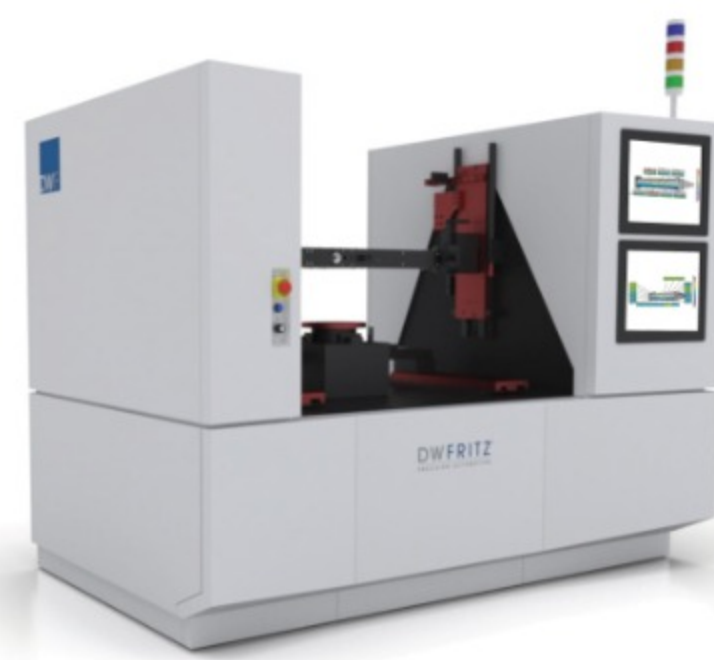
ZeroTouch - Front View

Key Benefits

- One system captures simultaneous multiple measurements in minutes versus a traditional CMM
- Easy creation of part measurement plans requires no programming, saving time in setup of different parts
- Measurement of surface finish as well as color and gloss
- Micron-level precision non-contact metrology with high repeatability
- In situ calibration improves repeatability
- Fast identification of production defects, enabling adjustment of upstream processes to reduce waste
- Ease of part placement reduces setup time per part
- Highly configurable and optimized for each manufacturer's specific application

Key Features

- Captures precision point cloud data to construct complex 3D profiles
- Full PolyWorks™ advanced analytics integration
- GD&T measurements, including complex geometries such as chamfers, knife edges, undercuts and bores
- Configurable metrology sensor bridge, including:
 - Laser and confocal sensors
 - High resolution cameras with multispectral lighting
 - Automatic part registration
 - Optional barcode scanning automatically loads inspection part plan from MES



ZeroTouch - Side View

Innovative Technology

Multisensor technology measures parts faster

Using application-based custom sensors, ZeroTouch can capture millions of data points per second in just one scan, unlike traditional CMMs. Multisensor measurement of complex geometries such as bores, undercuts and chamfers across a wide variety of materials enables precise inspection of even the most intricate parts with low GRR.

Full PolyWorks™ advanced analytics integration

Through PolyWorks software, parts can be analyzed by comparing point cloud scans with nominal CAD models and GD&T controls. Statistical process control (SPC) data can drive warnings to reduce variability and scrap.

Highly configurable control software

Working with MES, ZeroTouch will store and obtain inspection part programs, as well as measurement data for every part, preserving data integrity. Menu driven, automated creation of part measurement plans eliminates specialized programming. Inspection part plans can be launched easily by recalling the program from MES or via an optional barcode reader.

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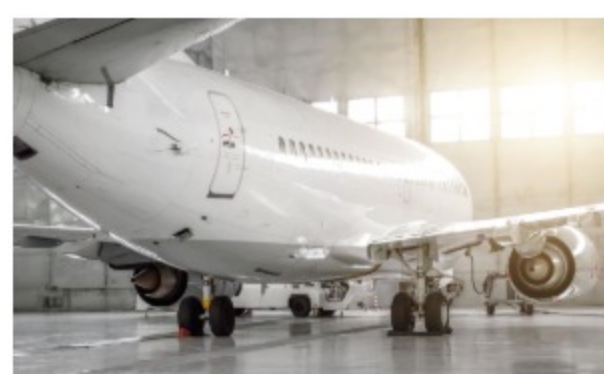
ZeroTouch - Side View (with Micro Environmental Option)

Applications



Automotive

- Powertrain components
- Gears and sprockets
- Clutches
- Pistons
- Bearings
- Brake components
- Valve bodies
- Gasket surfaces
- Crankshafts



Aerospace

- Turbine blades
- Gears
- Shrouds
- Impellers
- Diffusers
- Vanes/nozzles
- Compressor blades
- Blisks



Medical Devices

- Dental implants
- Medical implants (ocular, spinal, orthopedic)
- Surgical and general instruments
- Prosthesis
- Distractors (mandibular, cranial, osteo)

Key Specifications

Work volume	300 x 300 x 300 mm (L x W x H)
Inspection speed	Typical cycle time < 3 minutes
Options	<ul style="list-style-type: none"> • Barcode reader • Micro environmental temperature control ($\pm 0.5^{\circ}\text{C}$) • Part soaking • ISO Class 3 clean air system

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Resources

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