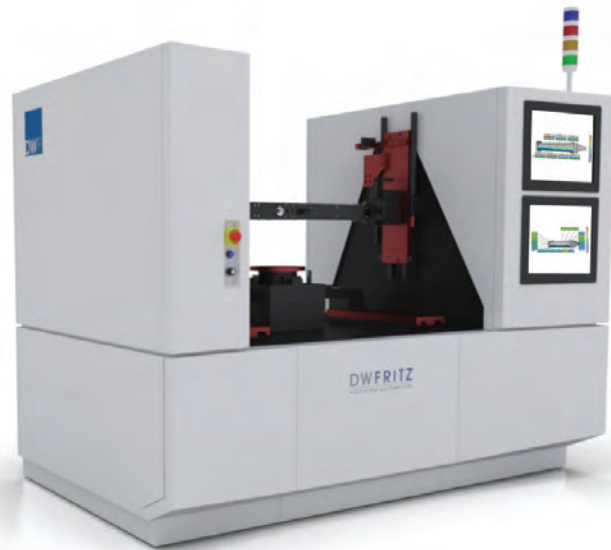


# DWFritz ZeroTouch™

NON-CONTACT MULTIPURPOSE METROLOGY PLATFORM

## SPECIFICATIONS

Work volume	300 x 300 x 300 mm (L x W x H)
Inspection speed	Typical cycle time < 3 minutes
Payload	0-10 kg
System dimensions	Main machine: 240 x 185 x 240 cm (W x D x H)
System weight	Main machine: 4082 kg (9000 lbs)
System controllers	High performance industrial PC operator station with touch screen and secondary display screen
Options	<ul style="list-style-type: none"><li>- Barcode reader</li><li>- Micro environmental temperature control (<math>\pm 0.5^{\circ}\text{C}</math>)</li><li>- Part soaking</li><li>- ISO Class 3 clean air system</li></ul>



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

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DWFritz Metrology is a leading, global provider of high precision metrology solutions for advanced manufacturing. The company develops, designs, builds and supports engineered-to-order automation systems, specializing in high speed complex inspections to enhance product quality.

**DWF**



## PART INSPECTION UP TO 10X FASTER THAN TRADITIONAL CMMS

DWFRITZ ZeroTouch™ uses multiple non-contact sensors to simultaneously capture 3D dimensional data, creating a high precision point cloud to measure part dimensions in just minutes, instead of longer cycle times like traditional coordinate measuring machines (CMMs). Setup and measurement takes minutes, not hours. Simply place the part and the intuitive user interface will guide the operator through the inspection.

ZeroTouch is an innovative, multipurpose measurement platform that combines multiple sensor technologies with custom multispectral lighting and deep learning software in one footprint. ZeroTouch's rugged industrial design offers the accuracy, precision and speed that manufacturers need to optimize inspection cycle time in production environments.

### KEY BENEFITS

- One system captures simultaneous multiple measurements in a fraction of time 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

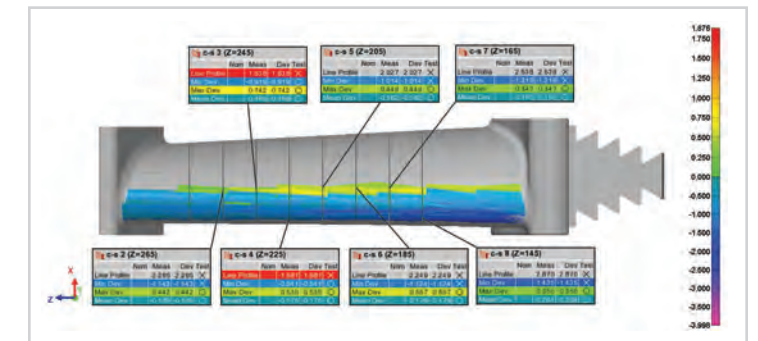
- Captures precision point cloud data to construct complex 3D profiles
- Full PolyWorks™ advanced analytics integration
- GD&T measurements, including complex geometries such as chamfers, knife edges, undercuts and bores
- Configurable metrology sensor bridge, including:
  - Laser and confocal sensors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

## INNOVATIVE TECHNOLOGY FOR SPEED AND ACCURACY

By leveraging more than four decades of developing high precision automation and metrology solutions, DWFRITZ Metrology is now launching the next generation of high speed, non-contact metrology platforms.



### Measurement Profile of Turbine Blade



### 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.

### Planar air bearing design minimizes tolerance stack error

With ZeroTouch's unique planar air bearing design, tolerance stack error is minimized. The air bearing design provides extremely smooth, high speed motion of precision stages, improving GRR. With this near zero friction design, there's no mechanical wear and performance remains consistent over time.

### 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. Updateable reporting technology automatically generates and updates reports as parts are modified, accelerating multipart inspection.

### 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. Control software also ensures operator safety, disabling tool motion when enclosure panels are open.

### KEY INDUSTRIES



#### Automotive

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



#### Medical Devices

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



#### Aerospace

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