FARO® OneClick™ Automated Inspection System

This system is part of the FARO Early Adopter Program

The FARO® OneClick™ uses automated intellig and a purpose-built hardware design to offe automated and high-accuracy 3D inspectio medium-sized parts and assemblies. One simple, yet sophisticated measurement c objects with a single click.

A OneClick System consists of:

- A non-contact 3D Imager that captures millions of high-resolution 3D points in seconds. The imager is mounted on a radial arm that enables it to move across a part to maximize scanning coverage.
- A rotating table with universal fixturing.
- Intuitive BuildIT software featuring Automated Intelligence to create inspection routines.

These three components work together to properly position the part and imager relative to one another and define how to optimally inspect the part. The entire inspection process including setup can be completely automated. OneClick inspection is fast, simple, sophisticated, and accurate. Manual programming is not required. Metrology expertise is not required. Users do not need extensive training to set up and use a OneClick System for inspection.

Features

Automated Learning

During the learn mode, the OneClick System uses Automated Intelligence (AI) to define the inspection routine. The CAD file is used as a starting point, and the Geometric Dimensioning and Tolerancing (GD&T) of the first part is analyzed. As the learn mode progresses, the complete inspection process is automatically defined including details such as specific areas requiring image capture and the camera exposure on the OneClick's 3D Imager. Part-flip guidance is also provided. If automated setup is not desired, the user can also customize the inspection routine.

Automated GD&T

Based on the CAD file and GD&T definition, OneClick evaluates the model's tolerances automatically.

Automated Analysis

During inspection, the OneClick System compares the part to the CAD model, or to "golden part" (if a CAD model is not available) reference point cloud.

Universal Fixturing

The part is quickly and easily placed and secured onto OneClick for inspection.

Automated Reporting

OneClick generates automated reports which support Statistical Process Control (SPC)-compatible formats. Standard reports automatically include GD&T from CAD or can be configured to suit specific requirements.

Benefits

Fully Automated Inspection Programming
Place the part on the OneClick and simply click. Virtually no training is required for inspection or programming.

Part Inspection Reliability
Intelligent automation standardizes inspection routines to ensure a repeatable and consistent measurement process, independent of operator variation.

Small Footprint
Inspection can be performed in a small area, on a table or benchtop. Self-contained, OneClick does not require a tripod and is much smaller than a Coordinate Measuring Machine (CMM) of similar capacity.

Transportable
With its small footprint, OneClick is easily moved throughout the facility or to a supplier's or customer's location, wherever inspection is needed.

Quick Return on Investment
Affordability, simplicity and virtually no training requirements allow OneClick to deliver a fast return on investment.

Specifications

Accuracy (MPE)*	38µm (0.0015 in)
Camera Resolution	5 megapixel
Maximum Part Size (for inspected parts)	
Size	Diameter: 300 mm x Height: 300 mm (Diameter: 11.8 in x Height: 11.8 in)
Weight	20 kg (44 lb)
Overall OneClick Dimensions	
Size	L 1040 mm x W 630 mm x H 230 mm (L 40.9 in x W 24.8 in x H 9.1 in)
Weight	19 kg (42 lb)

* Accuracy specification per VDI/VDE 2634 part 3 sphere spacing error procedure

OneClick Versus Fixed CMMs

Attribute	OneClick	Hard Probe CMM
Who can use it	Anyone	Highly trained CMM quality inspector
Non-contact inspection	✓	✓
No programming required	✓	-
Collision detection programming not required	✓	-
Fixturing	No special fixturing	Complex and expensive
Avoid inspection bottlenecks	✓	-
Rapid point cloud generation	✓	-
High inspection duty cycle	✓	-
Flexible part positioning	✓	-
Probing independence with point cloud acquisition	✓	-
Comprehensive feature measurement	✓	-
Transportable	✓	-

For more information, call 800.736.0234 or visit www.faro.com

ARO Technologies, Inc. | 250 Technology Park | Lake Mary, FL 32746

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