

Robust3D™ Overview

Smaller, lighter, easier to install, higher performance, industrially hardened, lower cost

Robust3D™ provides innovative three-dimensional (3D) high-speed, 100% reliable, and in-line error proofing solutions to ensure assembly correctness in automotive and other industries.

As a result of hands-on experience and in-depth knowledge of manufacturing processes, Coherix understands the complex assembly challenges the industry has been attempting to error proof with manual mechanical probes, or temperamental 2D vision cameras. However, with the complex nature of the problems and the dynamic work environment, these traditional technologies have proved to be unreliable with high cost of ownership.

Coherix innovative Robust3D solutions are designed and built to deliver error-free assemblies. Coherix Robust3D products utilize a family of cutting-edge sensors such as Tru3D™ and Crossbow™, proprietary complex algorithms, and i-Cite™ user-friendly software to deliver a wide range of specific solutions.

Robust3D generates a 3D “as-built” model of the part assembly, and applies various inspection criteria to catch every complex failure mode in the assembly process with unprecedented level of assurance.



Robust3D™ Piston Assembly error-proofing inline installation

Robust3D Benefits

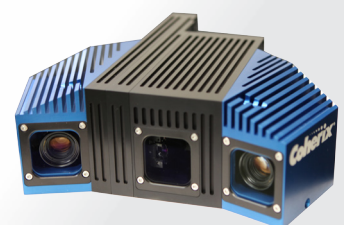
- End-user solution oriented
- Full robustness
- Detect all different failure modes
- Full part traceability with 3D data
- Hassle-free re-configurable reports for optimized user friendliness
- Easy system integration

Empowered with full 3D part data traceability, Robust3D is capable of upstream diagnosis of many complex manufacturing issues. Ease of creating reports to specific needs is recognized by many customers. Unique Robust3D design also ensures a smooth integration of Robust3D solutions into assembly lines.

Compact, lightweight, and versatile, Robust3D has been successfully implemented in various in-line error-proofing applications such as piston assembly, rolling finger follower assembly, valve assembly, and end-of-line inspection such as electrical connectors. It's also capable of measuring diesel piston bowl volume and gas engine combustion chamber volume.



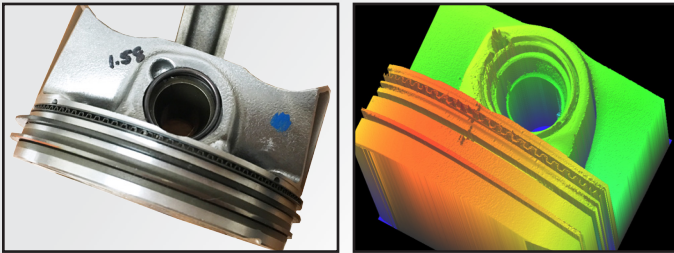
Tru3D™ sensor



Crossbow™ sensor

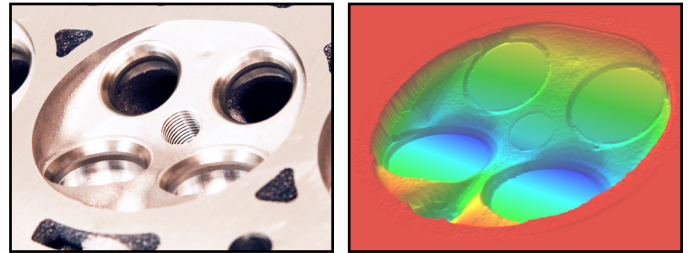


Robust3D Solution Examples



Piston Assembly

Missing circlip, double circlips, bent circlips, missing piston ring, etc.



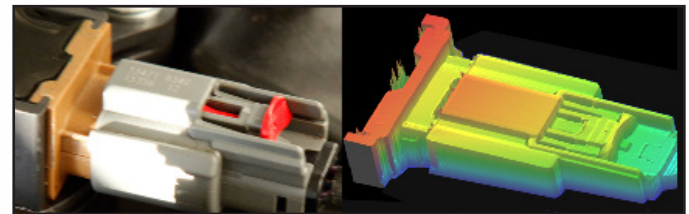
Combustion Chamber Volume

3D in-line measurement of combustion chamber volume



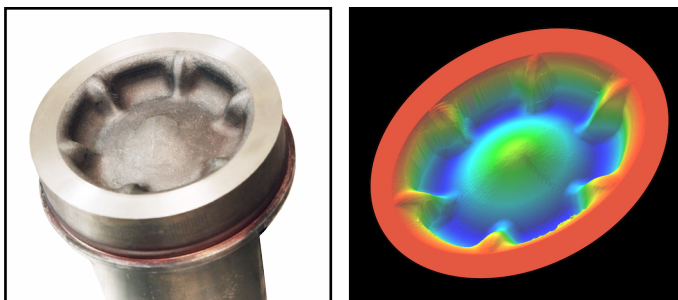
Valve Assembly

Missing keepers/mis-set keepers



Electrical Connectors End-of-Line Inspection

Connectors in/not in position, connectors locked/unlocked



Piston Bowl Volume

3D in-line measurement of piston bowl volume