

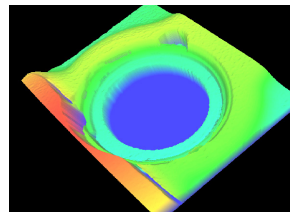
# Tru3D™ Vision Systems

*A better place to start for vision applications.*

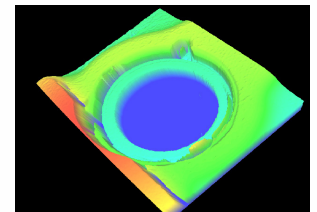
## Assembly Verification & Error Proofing

The Tru3D vision platform helps facilitate the stringent inspection requirements on the production floor and solves the toughest of inspection problems - problems that can't be adequately solved with traditional 2D vision systems. Tru3D, a robust 3D sensor, creates a 3D map of a part surface to perform reliable inspections within a 3D volume.

Instead of simply inspecting the appearance of a part, Tru3D images the real 3D geometry of a part, using millions of data points to identify and contain pass through defects in the manufacturing process. Tru3D can be configured into application-specific, easy-to-use, efficient, adaptable packaged solutions to meet critical assembly verification requirements.



Present piston pin circlip



Missing piston pin circlip

**Smart sensor architecture:** The self-contained, Tru3D sensor generates both 2D images and 3D surface profile data from a single sensor - converting unpredictable, low contrast images into high contrast, information rich 3D data, independent of part color. Tru3D dramatically improves the robustness of error proofing applications over traditional 2D inspection.

**Easy to use, non-contact, no moving parts:** This inspection solution, packaged in a smart sensor (lighting, optics, and processing all onboard) simplifies system setup and maintenance. With a 3-second acquisition time and no need to move the part or sensor, in-station integration is streamlined. Our process of 3D imaging using structured light, removes the effects of process noise (ambient light, part color, etc.), eliminating the need for ongoing adjustments to system parameters.

**Flexible:** The Tru3D technology can be configured to solve a wide variety of assembly verification and error proofing needs. Using 3D software tools to evaluate 3D data allows for multiple redundant checks including measurements of height, width, diameter, position and distance, to verify that the assembled part matches design intent.



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## Capabilities

- 3D surface shape imaging for assembly verification
- Full set of 2D & 3D vision tools included
- Customizable & configurable inspection
- Flexible mounting configurations
- Operator HMI
  - Triggers multiple sensors
  - Coordinates results of multiple sensors
  - Provides status & reporting screens

## Characteristics

Input power: 24VDC

LED-based illumination

Sensor Models	Standoff (mm)	FOV (mm)
	200	50 x 50
	400	100 x 100
	600	150 x 150

## Interface/Connectivity

Gigabit Ethernet

PLC Communication Interfaces

(Native) Modbus TCP, Omron TCP

(via OPC) Allen Bradley, Siemens, etc.

USB & VGA for local keyboard/mouse access

Opto-Isolated Digital I/O

2 inputs

4 outputs

## Environmental

Operating temperature:

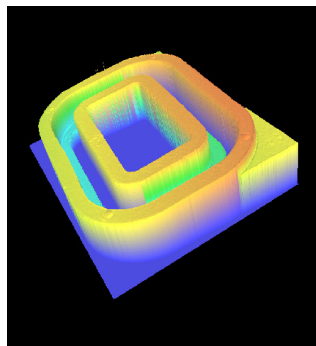
10 - 45 degrees C

Protection: IP50, IP65 option

## Sample Applications



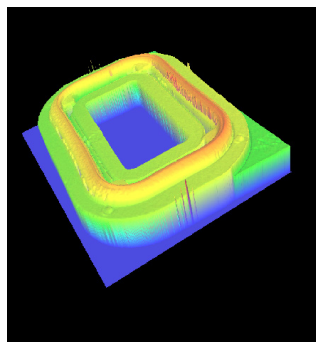
Missing gasket photo



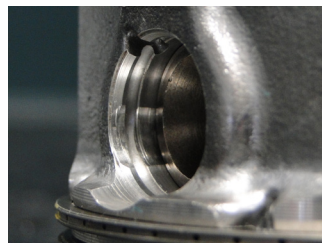
Missing gasket 3D map



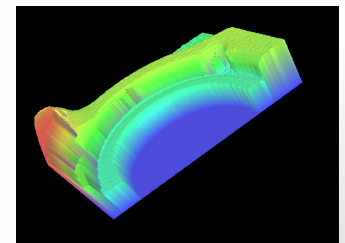
Present gasket photo



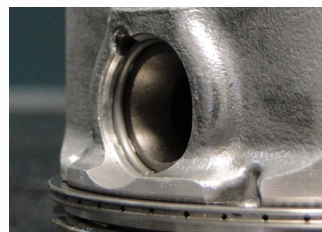
Present gasket 3D map



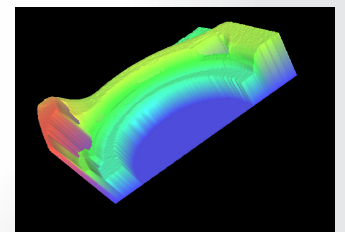
Missing circlip photo



Missing circlip 3D map



Present circlip photo



Present circlip 3D map

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