



PLANAR

High Speed Integrated 2D & 3D Measurement System
Inspection & Reverse Engineering



Speed, accuracy & reliability

PLANAR - ONE SYSTEM FOR ALL YOUR MEASURING REQUIREMENTS

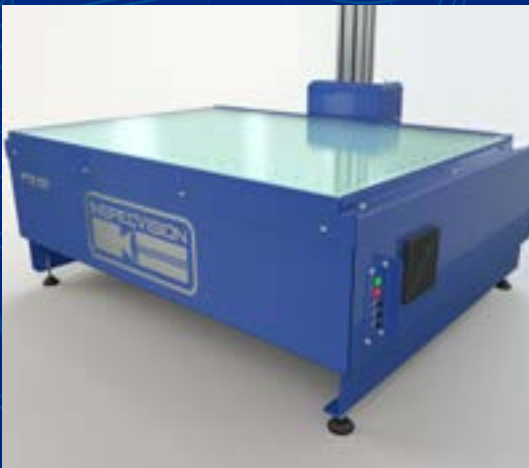
Planar is the world's fastest 2D measurement and reverse engineering system.

Designed specifically for quick, accurate first article inspection, quality reporting and reverse engineering, Planar is ideal for shop floor use, requires minimal operator input and is proven to increase production throughput across a wide range of applications including:

- Flat and folded/formed sheet metal components
- Gaskets and seals
- Laminations
- O-Rings
- Paper acetate and electronic drawings
- Other opaque and semi-transparent flat materials

Typical customers include sheet metal fabricators using X/Y CNC, laser, plasma, punch, water jet cutting and forming machines who supply to a wide variety of industries such as automotive, aerospace, electronics and communications. The Planar is used in over 30 countries worldwide from small job shops to multi-billion dollar turnover companies.

To extend the Planar to 2.5D, our SurfScan module can be retrofitted. For full 3D capability simply add our Opti-Scan 3D. With the complete system, parts can be checked at every stage of the production process.



THE TECHNOLOGY -2D INSPECTION

Parts are placed on a backlit glass surface. With a single click or scan of a barcode, over 40 million edge measurements are taken in 0.1 seconds using a high resolution camera.

Within seconds Planar will:

- Import the CAD file for the part
- Extract the relevant profile data
- Extract all dimensions and tolerance data from the layers
- Measure the part
- Generate reports automatically including measured data, nominal data, tolerance information and indicate all PASS/FAIL items
- Display/Print a colour deviation diagram comparing CAD data to measurement data
- Project deviations back onto the part using Augmented Reality
- Output SPC data for analysis

The 2D process can measure every feature completely and produce multiple report types automatically with minimal input from the operator.

Planar can be fully integrated with QC Calc SPC software enabling automatic creation of documents and traceability to meet requirements for QC reporting.

The system includes O-ring inspection as standard, enables multiple O rings to be measured in 0.1 seconds and quick identification of the failed parts.



2D REVERSE ENGINEERING

2D reverse engineering is a standard feature with every Planar system. Existing parts can be reverse engineered in seconds creating dxf or dwg CAD files. The software allows the user to edit and clean the data such as standardisation of hole sizes and clean edges and eliminates the need for hand measurement and CAD programming.

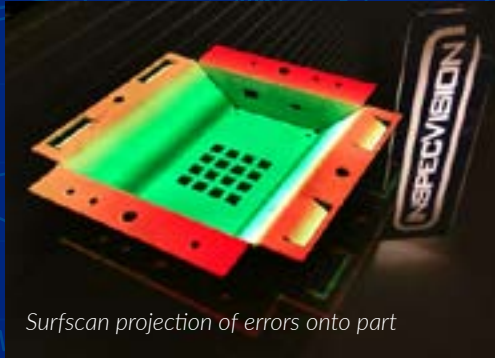
Physical parts or even paper, acetate or electronic image files can be reverse engineered to create CAD files. There is no comparable system on the market today which can offer this capability with such speed and ease of use. Reverse engineering processes can also be carried out in 3D using the optional 3D modules.



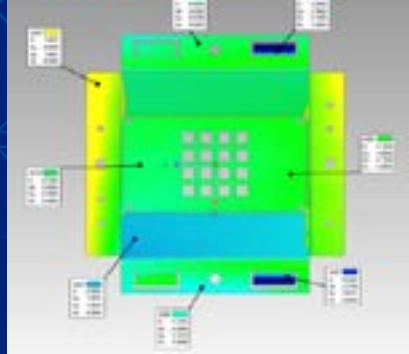
SURFSCAN – 2.5D ADD-ON OPTION FOR PLANAR

Many punching machines do not produce completely 2D parts. The parts have forms, louvers, small bends, pins etc. The SurfScan integrates seamlessly with the Planar 2D automatic inspection software to allow accurate inspection of both the parts 2D shape and its 2.5D features with a single click.

The SurfScan is a high resolution projector which mounts onto the existing Planar vertical column. The projector shines structured lights onto the part which are then imaged by the Planar's camera to create a 3D scan of the upper surface of the part, providing a powerful, yet easy to use 3D or 2.5D inspection capability.



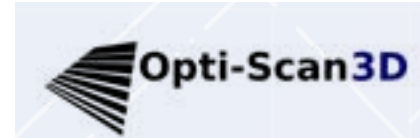
Surfscan projection of errors onto part



The point clouds or meshes created by the system can then be loaded into free and readily available 3D inspection software for comparison against a 3D solid CAD model, such as step or igs.

The point clouds are also compatible with packages like Geomagic Control, Control X, Polyworks etc. Parts with complex geometry can be scanned from several angles to create a complete scan of all visible surfaces

OPTI-SCAN 3D - 3D ADD-ON OPTION FOR PLANAR



Opti-Scan 3D is the world's first 3D inspection system that can measure surfaces and edges in 3D. This non-contact white light scanning system uses a high speed, high resolution camera and an LED DLP projector to scan the surfaces of an object.

Patterns of light are beamed from the projector onto the part, these patterns are recorded by the camera and used to create a 3D point cloud of the scanned surface.

The Opti-Scan 3D outputs the ultra high resolution point clouds into a number of different file types which can be used in virtually any 3D inspection or reverse engineering software package.

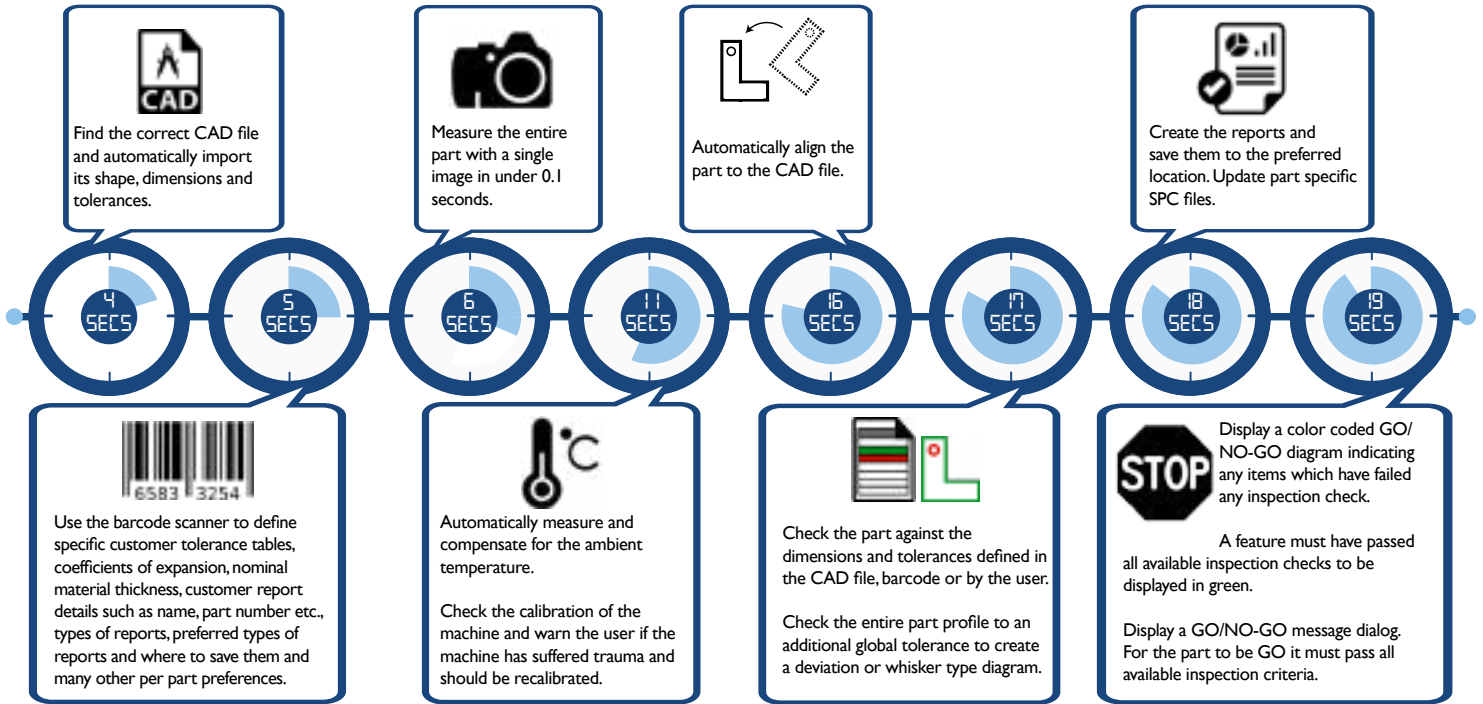
Opti-Scan 3D can be added to existing Planar systems transforming Planar into a complete 2D and 3D measurement system.



Key Features

- Single click automated inspection
- White light Scanning Technology
- 3D Surface and Edge Measurements -the world's only system that can measure edges in 3D.
- Texture mapping -can create a fully texture mapped point cloud in full colour.
- Speed and accuracy – scans objects at a rate of approx. 250,000 measurements per second.
- Retrofit and use with Planar 2D

Planar 2D -Typical Inspection Timeline



WHY CHOOSE PLANAR?

- World's fastest 2D inspection and reverse engineering system
- Fully automated one click inspection
- Machine sizes range from 500mm to 3000mm
- Accuracy from 12 microns
- No moving parts
- Scratch resistant
- Designed for shop floor use
- Simple calibration and minimal maintenance
- Minimal training required
- Easily retrofitted with full 3D scanning.
- Rapid return on investment

WHAT OUR CUSTOMERS HAVE TO SAY.....

"The greatest benefits for us are the accuracy, the user interface and the speed in which we can inspect parts"

Stephen Burnett, Sr. Project Engineer
Sub-Zero Group Inc, Wisconsin, USA

"Due to the reliability of the machine we have not had the need to request support often...but support has always been excellent whenever it has been requested"

Operations Director
Whitwam Precision Components Ltd, Lancashire, UK

"The Planar machine has reduced our inspection time by 80%. We inspect about 90% more parts than before."

Quality Manager,
Siemens, Jiangsu Province, China



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