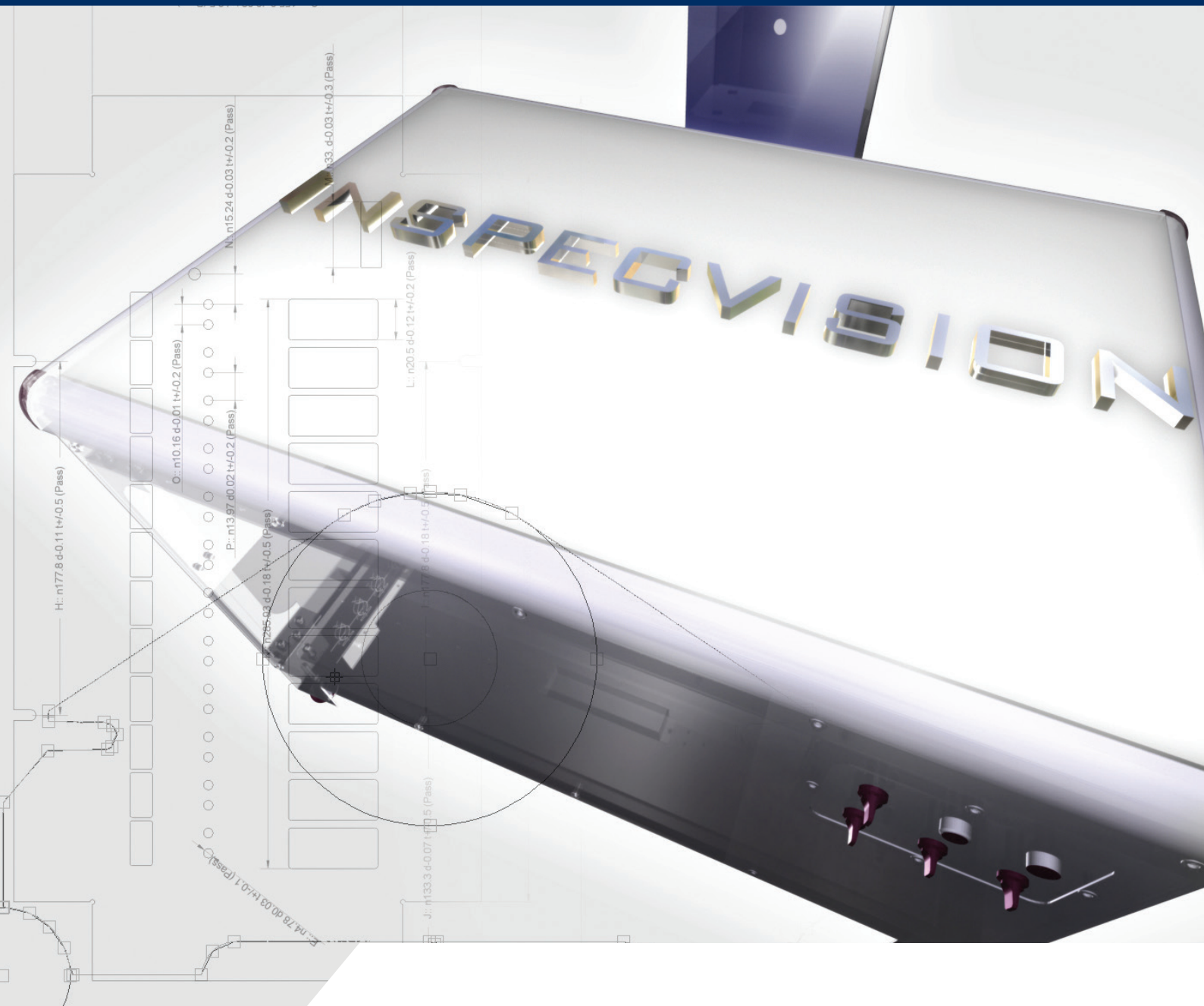


PLANAR

High Speed Integrated 2D & 3D
Measurement system



INSPECTION & REVERSE ENGINEERING



Speed, accuracy and reliability

ALL YOUR MEASURING REQUIREMENTS SOLVED WITH A SINGLE SYSTEM

Our award winning Planar is the world's fastest 2D measurement system. There are no moving components and the measurements are taken using a very high resolution camera, which scans parts placed on a backlit glass surface. It can be used for inspection and reverse engineering of flat opaque and semi-transparent parts. By adding our additional Opti-Probe and Opti-Scan 3D modules, the measurement capability can be extended to full 3D using both touch probe and white light scanning technology. Using this complete system, parts can be checked during every stage of the production process. Flat profiles can be inspected with Planar, then after bending/forming the final part can be inspected with one or both 3D measurement modules.

We have a large selection of machine sizes from small to large and you can measure parts up to 3000mm x 1220mm (118" x 48") or 2355mm x 1570mm (93" x 62") in size at accuracies between +/- 12 microns and +/- 100 microns (+/- 0.00047" to +/- 0.0039")

2D INSPECTION

InspeCVision's Planar system has been designed specifically for speed, accuracy and ease of use. The 2D process can measure every feature completely. Planar can produce multiple report types automatically with minimal input from the operator. To inspect, the operator places the part on the measurement surface and with a single click or scan of a barcode, Planar will:

- Import the CAD file for the part
- Extract the relevant profile data
- Extract all dimensions and tolerance data from the layers
- Use this information to generate reports automatically
- Measure the part
- Fill in reports with measured data, nominal data, tolerance information and will indicate all PASS/FAIL items
- Display and optionally print a colour deviation diagram comparing CAD information to measurement data
- Output SPC data for analysis

2D REVERSE ENGINEERING

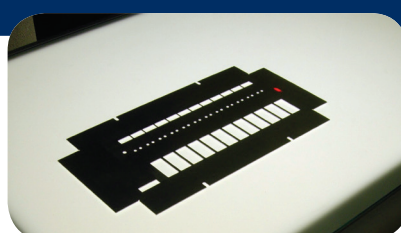
One special feature of the Planar system is it's unique ability to very rapidly reverse engineer flat parts. A profile can be placed onto the machine and reverse engineered in seconds. The machine will output dxf or dwg CAD files which can then be used on a cutting system to make duplicates of the part, or simply to document a part for which no drawing exists. Familiar CAD functionality allows the user to edit and clean the data to ensure standardisation of hole sizes etc, and clean edges for example, before saving out the file.

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 this ease and speed.

Again using the optional 3D modules, similar reverse engineering processes can be carried out in 3D.

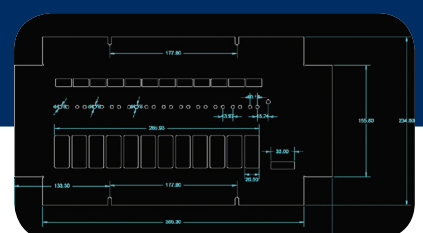


INSPECTION



MEASURE COMPONENT

+



COMPARISON WITH DRAWING

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OPTIONAL 3D MEASUREMENT

OPTICAL CMM OPTION

Planar has the additional option of adding 3D measurement capability by installing our Opti-Probe module. The Opti-Probe is a wireless touch probe device fitted with special optical markers that are tracked by our camera. Measurement can be taken in 3D, which can then be used for inspection or reverse engineering applications. This device can be retrofitted to the Planar system and is also available as a standalone product.



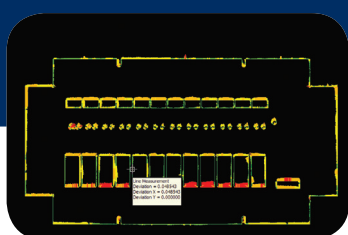
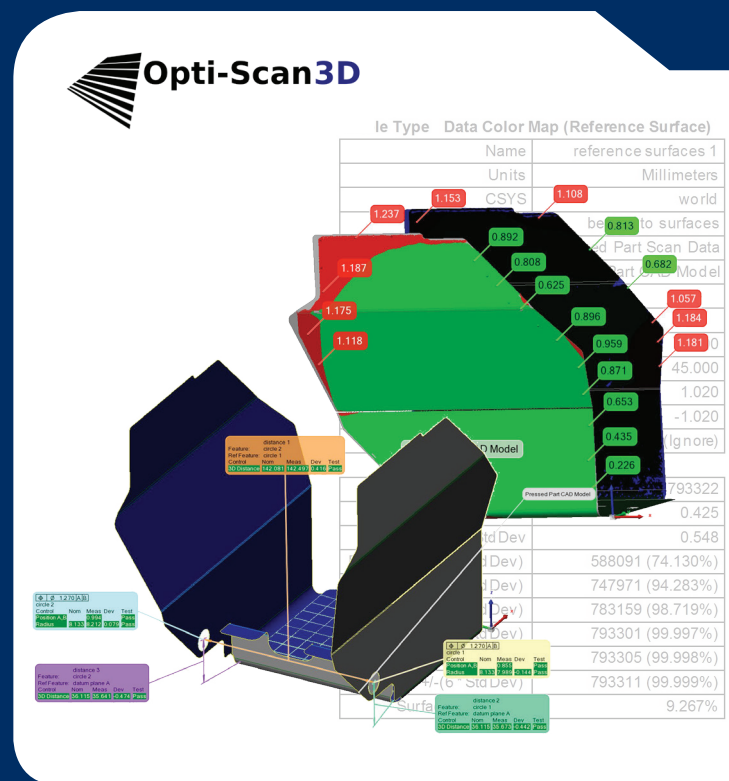
WHITE LIGHT SCANNING OPTION

Opti-Scan 3D is a retrofittable additional module that can be added to existing Planar measurement systems. Using white light scanning/fringe interferometry, it can measure parts in seconds. This transforms our award winning 2D Planar inspection machine into a complete 2D and 3D measurement system. With the ability to measure both surfaces and edges, it's the first system of its type in the world!

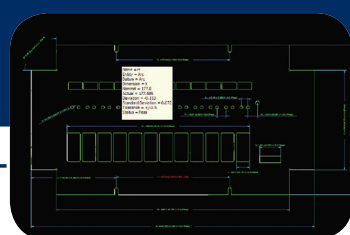
Opti-Scan 3D features:

- Automatically import point cloud data from the Opti-Scan 3D to a 3D inspection software package to compare the part against its nominal CAD data.
- Align measurement data and CAD together and create full inspection reports taking advantage of accurate edge measurements.
- Visual comparison using coloured deviation maps quickly displays problem areas on parts.
- Powerful inspection software suites are at your disposal using the high quality and accurate measurement data from Opti-Scan 3D

Using the same data scan parts can also be reverse engineered using specialised third-party software packages. The Opti-Scan 3D outputs several formats of industry standard scan data files, including texture mapping information as standard.



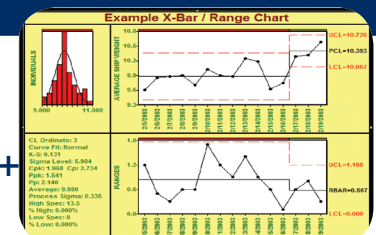
DEVIATION MAP



INSPECTION REPORT



CERTIFICATE OF CONFORMANCE



EXPORT SPC DATA

COMPARISON WITH COMPETITION

	Planar System	Similar Competing systems
Measuring speed	World's fastest system of its kind. Millions of measurements in 0.1 seconds	Measurements of single components can take minutes
Inspection Setup	Fully automatic measurement and reporting using dimension and tolerance data extracted from CAD files	Only partial automation possible
Accuracy	ISO 10360 guaranteed accuracy	Non-certified dependent on moving parts which are subject to wear
Reliability	No moving parts to wear or fail Vibration and scratch proof operation	Complex systems with moving camera, lasers and mechanical components. Typically sensitive to vibration and scratches
3D Measurement	Opti-Scan 3D and Opti-Probe options enable full 3D surface and edge measuring and touch probe capability	Some very limited Z measurements may be possible
Flexibility	Wide range of sizes and models for different applications. All options can be retrofitted	Limited range of models
Cost	Very low cost due to patented design	Closest similar system can up to 2x to 3x the cost
Operating Environment	Designed specifically for factory floor conditions	Vibration, dust and scratch controlled environment



TYPICAL CUSTOMERS

Most of our customers are sheet metal fabricators and generally any manufacturers who own/operate X/Y CNC, laser, plasma, punch, water jet cutting and forming machines. We have installations in a wide range of companies, from large multi-national firms to small job shops in over 30 countries globally.

TYPICAL APPLICATIONS

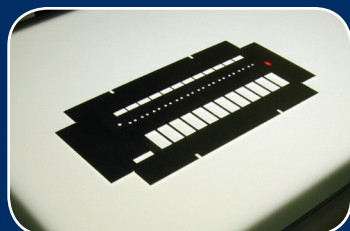
Inspection and reverse engineering of:

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

RAPID RETURN ON INVESTMENT

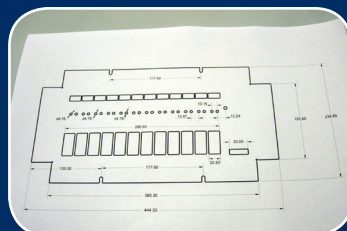
For first article inspection, fast payback periods of <2 years are easily achievable, dependent on batch size and component complexity.

REVERSE ENGINEERING



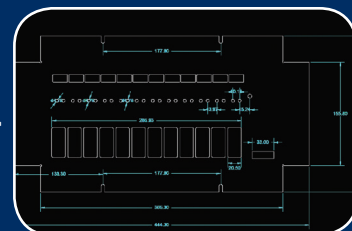
MEASURE COMPONENT

or



SKETCH

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CAD FILE



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