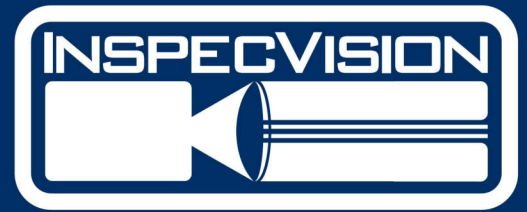
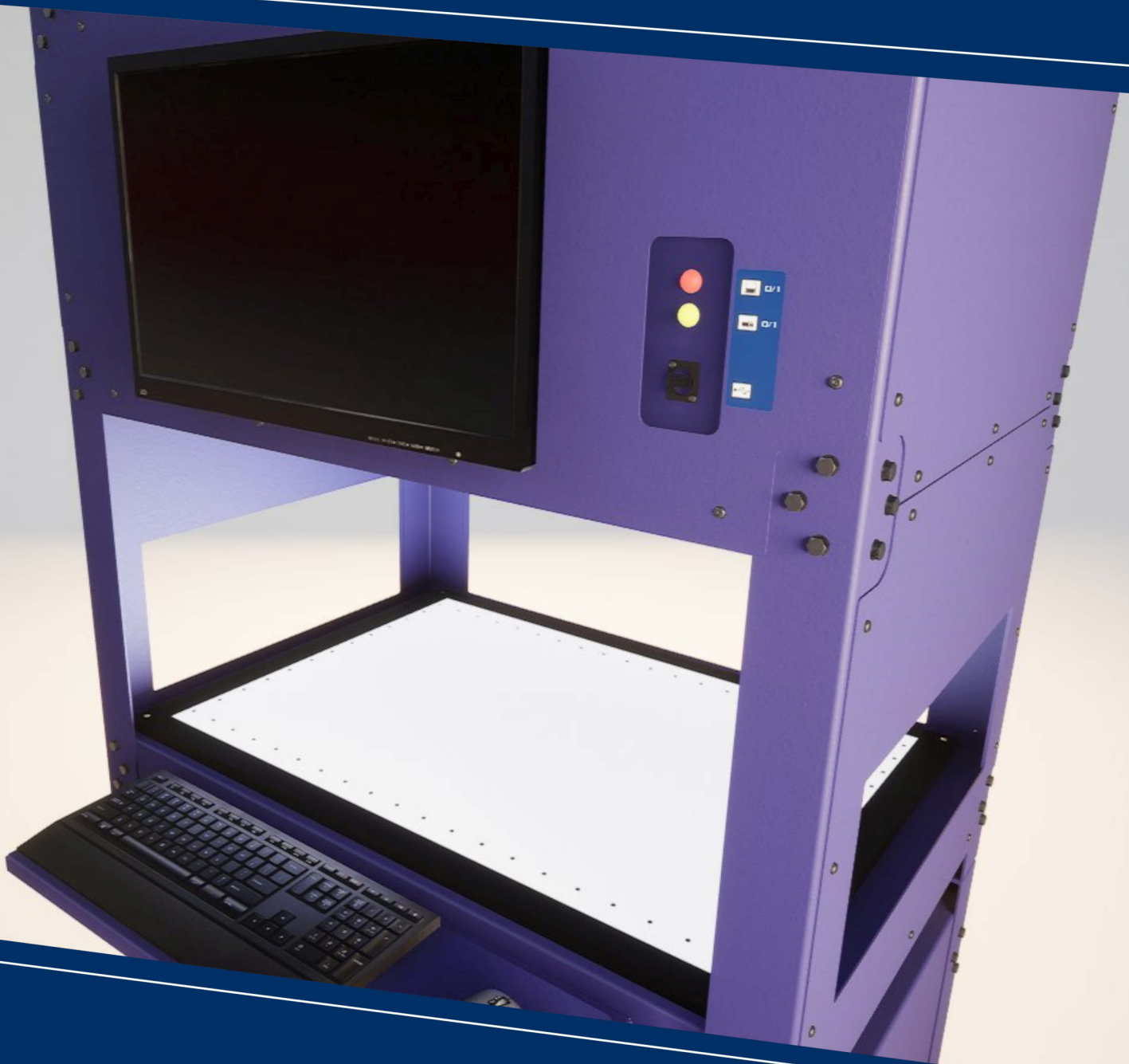


# P43.100



Cost Effective 2D & 3D  
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.

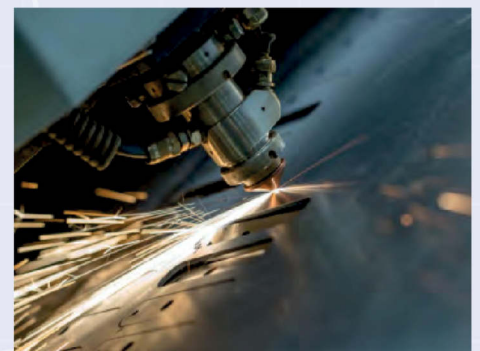
Planar can be fully integrated with QC Calc SPC software enabling automatic creation of documents and traceability to meet requirements for QC reporting.

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.

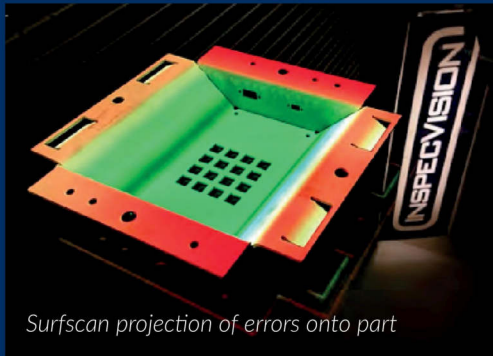
Physical parts or even paper, acetate or electronic image files can be reverse engineered to create CAD files. There is no comparable system on the market today which can offer this capability with such speed and ease of use. Reverse engineering processes can also be carried out in 3D using the optional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



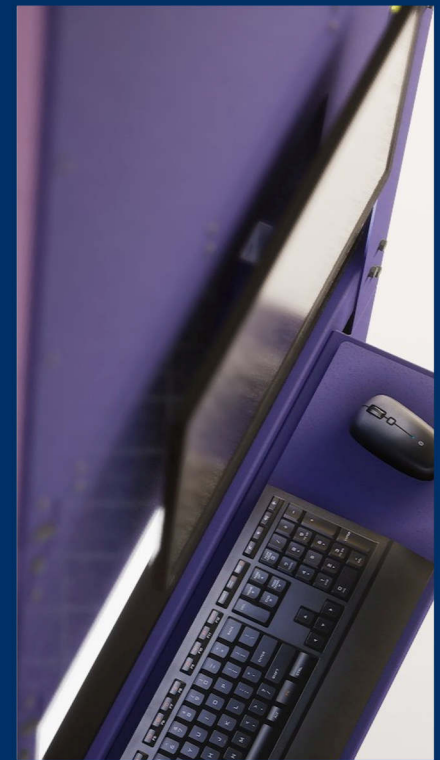
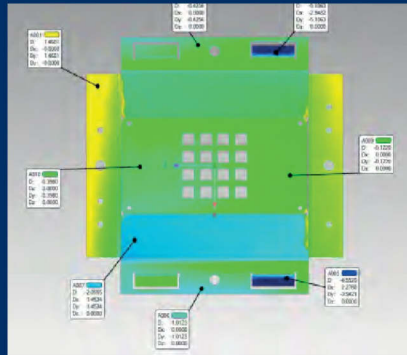
## SURFSCAN – 2.5D

Many punching machines do not produce completely 2D parts. The parts have forms, louvres, 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 iges.

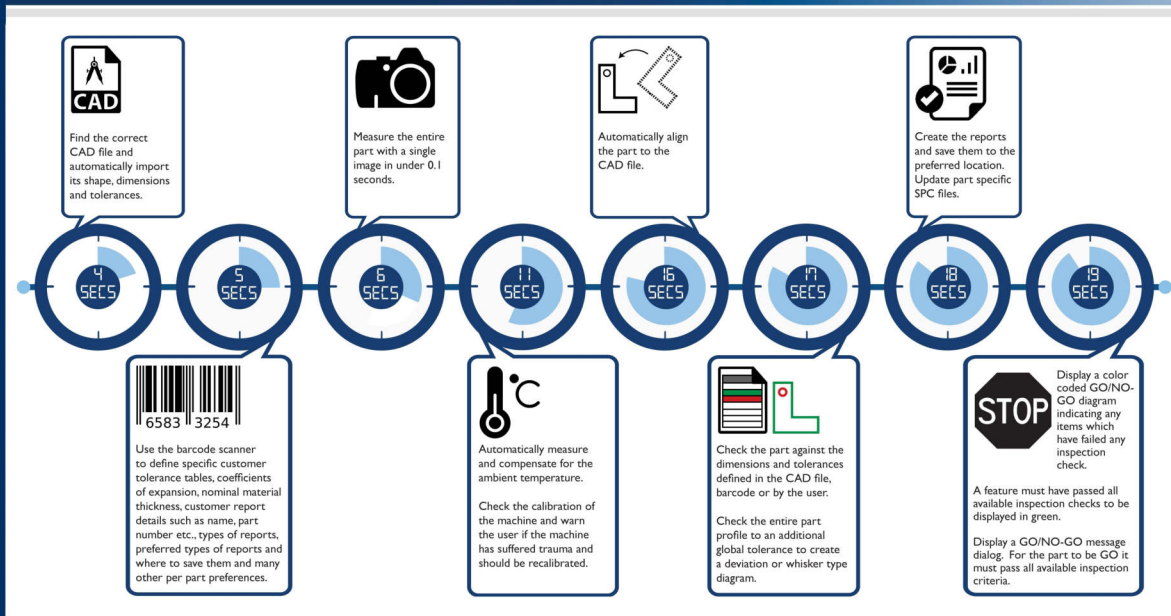
The point clouds are also compatible with packages like Geomagic Control, Control X, Polyworks etc. Parts with complex geometry can be scanned from several angles to create a complete scan of all visible surfaces

## Planar 2D - Typical Inspection Timeline



The Planar inspection system is the worlds fastest and most automated 2D inspection system.

Zero setup, single click inspection, up to 40 million points in under 20 seconds!



## WHY CHOOSE PLANAR?

- World's fastest 2D inspection and reverse engineering system
- Fully automated one click inspection
- Reposition parts larger than the scanning area
- Plug and play installation
- 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

# Specification and scope of supply of P43.100

Description	Specification/scope of supply
Max component length	810mm
Max component width	520mm
Max component thickness	50mm
Max component weight	25kg – UDL (Uniformly Distributed Load)
Measuring accuracy, length & width**	+/- 100/200µm
Measuring accuracy, height** (optional)	+/- 300 µm
Measuring speed**	<0.25sec
Camera	Industrialized ultra high resolution professionally mounted in sealed enclosure
Computer processor	Intel Dual Core
Processor speed	2GHz
Hard disk	<256Gb
Screen	24 inch flatscreen
Peripheral equipment	Keyboard and optical mouse
Operating software	Windows 10- 64 Bit
Proprietary InspecVision software	2D & 3D Inspection, SPC, Reporting, Reverse engineering
Data cable	USB2 or USB3
KVM	Keyboard, Video Display & Mouse stand (PC integrated into light table assembly)
Light table construction	Frame with removable sheet metal cladding
Light source	High efficiency LEDs
Power supply	230 Volt, single phase, 50Hz or 110 Volt, single phase, 60Hz on request
Power consumption	5 Amp maximum at 230 Volt, 10 Amp max at 110 Volt
Control panel	Control switches for computer and projector power and USB port
EC directives	Compliant with Machinery, Low voltage and EMC Directives
Paint colour (powder paint)	RAL5013 (cobalt blue)
Ambient operating conditions	10-30 degree C
Approx Footprint/installed width/ depth/ height/ weight of installed System	1029mm (W) x 1128mm (D) x 2176mm (H) approx weight 250kgs
Approx Footprint/installed width/ depth/ height/weight including optional stand	1029mm (W) x 1128mm (D) x 2726mm (H) approx weight 300kgs
Warranty	One year limited warranty on hardware and software
Optional extended warranty	Two or three year extended warranty (requires software upgrade option)
Software support option	Annual support contract provides free software upgrades
Installation	Plug & Play

\*The first accuracy value specifies the accuracy achieved over most of the table, the second accuracy value specifies the accuracy achieved at table edges

\*\*Accuracy results are verified on standard production machines using tests based on ISO 10360

Actual measuring accuracies achieved will depend on operating environment, user input, quality and condition of materials

Errors and omissions excepted

Due to our policy of continuous improvement specifications are subject to change without notice, please contact factory or your InspecVision dealer

## P43.100 Schematic With Optional Stand

