

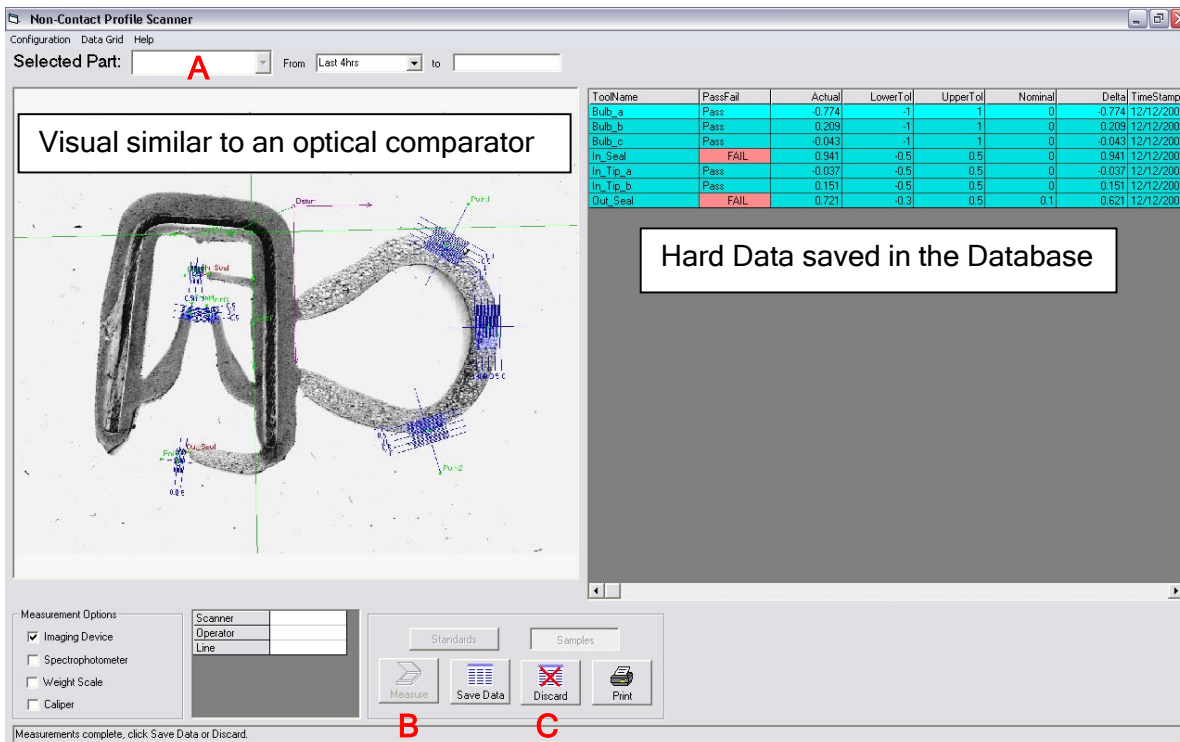
FS200 Profile Scanning System Technical Description:

Rev.12.8.2010

Overview:

The objective of the FS200, is to have non-technical operators perform profile measurements. The measured results are viewed and presented to the operator as an image of the profile in a similar manner to which a mylar on an optical comparator might look. On the adjacent window, the hard data can be viewed. Both the data and the images are saved for archiving and the data may be used for SPC analysis. Multiple production systems can be networked.

Sample of the operator screen:



ToolName	Pass/Fail	Actual	LowerTol	UpperTol	Nominal	Delta	TimeStamp
Bulb_a	Pass	-0.774	-1	1	0	-0.774	12/12/2005
Bulb_b	Pass	0.209	-1	1	0	0.209	12/12/2005
Bulb_c	Pass	-0.043	-1	1	0	-0.043	12/12/2005
In_Seal	FAIL	0.941	-0.5	0.5	0	0.941	12/12/2005
In_Tip_a	Pass	-0.037	-0.5	0.5	0	-0.037	12/12/2005
In_Tip_b	Pass	0.151	-0.5	0.5	0	0.151	12/12/2005
Out_Seal	FAIL	0.721	-0.3	0.5	0.1	0.621	12/12/2005

How the operator scans a profile:

1. The profile product number is selected from the "Selected Part" (see **A**.above image).drop down box. This box can also accept character entries as this may be useful if you have hundreds of parts in the system.
2. The operator places the cut cross section of the part on the scanner.
3. The operator selects the Measure Button (see **B** above image) and then presses Scan.
4. Following the scan approximately 20 seconds (depends on scan area and resolution) the image and the data will appear.
5. At this point the operator has three buttons "Print" -prints a report, "Save Data"- saves the data and the scanned image, or "Discard" - clears the scan and data without saving.(see **C** above image).

Measurement Routine Design (for FS200DL - design license):

A separate design license is issued to the purchasing company permitting a trained person to create the measurement routines (called toolsets) on a different computer. A second scanner is included and the design system also has the ability to measure a profile but does not have a database connection like the production systems. Some companies use the design license like a second scanner system for some profile measurements.

System Accuracy:

Defining system accuracy based on an N.I.S.T. traceable glass slide yields a repeatable accuracy of ± 0.0015 inches. Your specific results will depend on the sample preparation method.

Measurement Features:

Geometric Measurements:

- Definable XY Datum planes
- Allows multiple Datum planes in the same measurement routine
- Upper Lower and Nominal Tolerance fields
- Point to point, Delta X or Delta Y measurements
- Angle measurements
- Radius measurement

Graphic Tools:

- Reticule Overlay (similar to mylar band)
- Cad Overlay (may be segmented to different Datum Planes)

HMI Interactive Measurement Function:

- The purpose of this function is to give an operator or QC person the ability to add a measurement or an angle quickly and easily to a profile whether or not there is a toolset (measurement routine) for it. This function does not change an existing toolset on a production system but allows for a random spot check of any profile feature.

Security:

All components of the software have a "Supervisor" mode that is password protected. Unless you have the passwords you are restricted to the functions listed in the section "How an operator scans a profile".

Support:

The key components in the product today are software based. Using telephone and on-line services such as Webex from Cisco, we can communicate directly to your equipment through a standard web browser. This can be used for support as well as education.

About PLV:

PLV Systems has been in business since 1989. The company originally designed machine vision inspection equipment primarily for the automotive industry.

In 1997 PLV was introduced to a manufacturer of automotive extrusions seals. This project showed us that our technology was a good fit for problems encountered by manufacturers and end users of profile extrusions. This led us to become a designer of inspection products for the profile extrusion industry. We view ourselves as a technology partner to this industry for solving process problems in a cost effective manner. Our goal is to develop products that provide cost benefits to the extrusion process and to the users of extrusion profile.

We have today delivered over 160 systems to this sector. We continue to perform R&D to advance the products and develop new techniques to improve the profile extrusion process.

PLV Systems Inc.
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Concord, Ontario, Canada
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Contact: Sam Melamed
(905)-761-7234 ext.24

Current Pricing (subject to change without notice):

FS200DL - Design license and 1 Production License (FS200WDCI) \$20,000.00

Includes:

- 2 scanners calibrated with covers.
- 1 calibration mylar plate
- Training for 1 at the Toronto Office (onsite available for up to 3 people at a nominal additional cost)
- 1 year on line and phone support
- 1 year warranty on the scanners

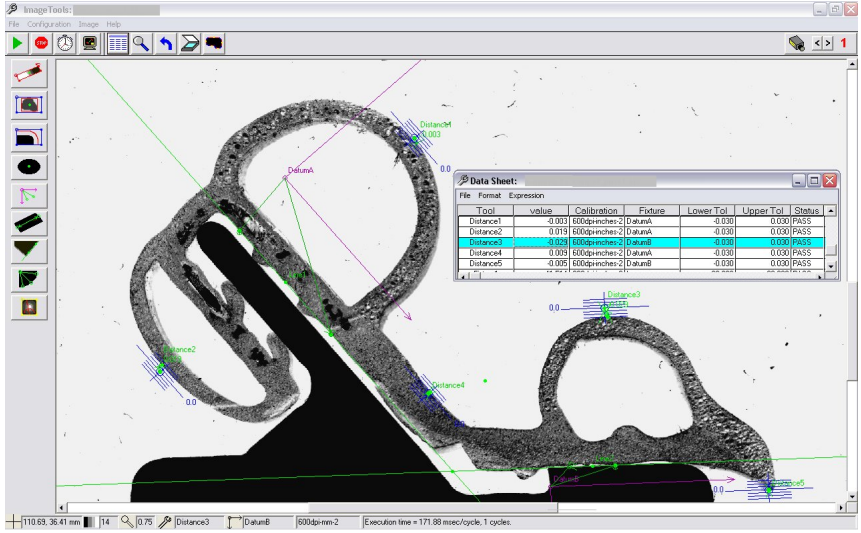
FS200WDCI- Production License only \$3,450.00/year. Profile measurement routines (toolsets) can be purchased separately from PLV or created on any design license.

Includes:

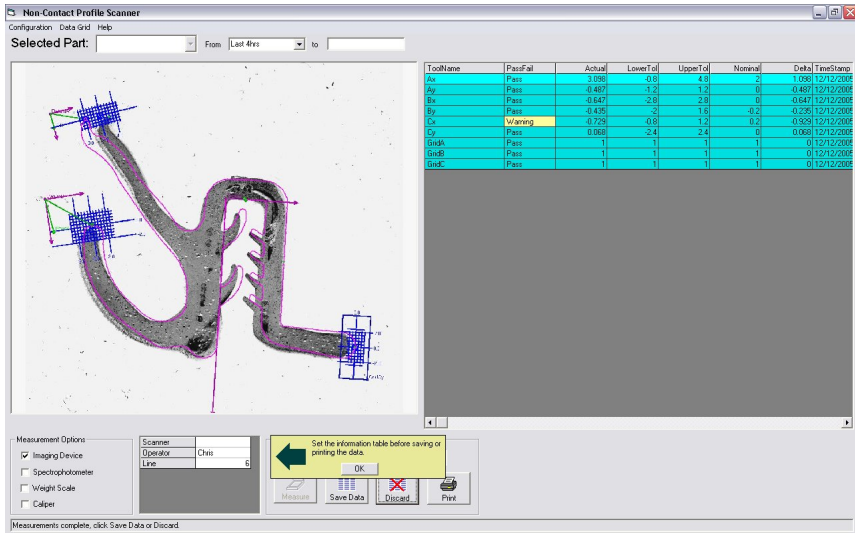
- Scanner with calibration mylar
- On Line and phone support
- On-line training for operators

All systems do not include a computer. Standard Terms and Conditions apply.

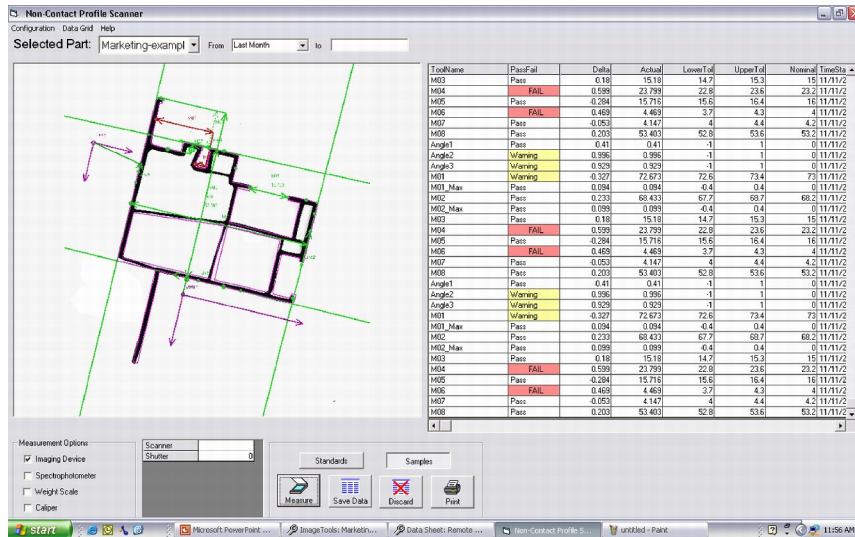
System Image Examples:



Part in a fixture with multiple datums.



Part with a Cad file overlay.



Window and Door Profile