



## WHY MICROVU?



**Rotary Indexer**

**Touch Probe**

### Ease of Use –

The InSpec software is extremely intuitive with a very logical, graphical display and very few dropdown menus. Operators and Programmers can usually be fully trained in 3 short sessions.

### Cost of Ownership –

- Turnkey System - Quoted prices include everything.  
*(3 sessions of training, taken @ your discretion / Installation, Calibration, Certification / Technical Support)*
- MicroVu parts and accessories will typically be **1/2 to 1/3** the price of most competitors.  
*(eg: MicroVu motorized Zoom Lens Assembly \$1,750 / competitor \$7,000 - both from same mfr)*
- Equipment Upgrades for the future - MicroVu upgrades  
*(eg: DOS to latest InSpec 2.0 Windows XP software is \$3,400 including computer + labor vs \$19,000 for the competition)*
- Computer Upgrades  
*(eg: MicroVu Systems are designed as true USB devices. When computers or operating systems become obsolete, your IT department can replace the computer with a computer of their choice.)*
- **No annual software maintenance charges**
- **Free upgrades** for the life of the major revision
- Local Service  
*(ATI is a local Sales and ISO 17025 Accredited Service organization - Minimal expenses)*
- Annual Calibration Costs  
*(ATI is 1/2 to 1/3 the price of an OEM)*
- Touch Probe & Rotary Indexer Kits  
*(MicroVu's kits are totally complete and the most price competitive kits offered by any manufacturer today)*



## Software -

- InSpec 2.0 contains everything in 1 package - **NO COSTLY SURPRISES OR ADDITIONAL MODULES NEEDED AFTER THE PURCHASES!**
- InSpec 2.0 is 3D – No need to purchase a costly 3D module after the sale.  
*(Most other software packages offered by other manufacturers have limits causing expensive upgrades after the fact)*
- Touch Probe Software Tools built-in  
*(No additional modules needed to be purchased to add a Touch Probe. It's truly "Plug & Play")*
- Rotary Indexer Software Tools built-in  
*(No additional modules needed to be purchased to add a Rotary Indexer. It's truly "Plug & Play")*
- Ease of Use - No flipping through screens  
*(Everything is visible from a single view)*
- Ease of Use - Easy to edit  
*(Features, Inputs, Tools, Lighting & Zoom all can be easily edited anytime in a program. Not true with other software packages)*
- Ease of Use - Click and "MOVE HERE" tool  
*(Point with mouse and move is a tremendous time saver when writing programs or measuring)*
- **Blob Analysis Tool** - Measures non-descript shapes  
*(In a snapshot measure and define any non-descript shape (X width, Y height, centroid)*
- **Part Scanning** - Full feature scanning built in  
*(Place a starting point on an edge and InSpec automatically scans the entire perimeter of the edge and allows it to be measured as any shape)*
- **Individual Feature Scan Tool** –Accurately measures features with up to 99 points in a snapshot  
*(Diameters, lines, angles, ellipses, slots, rectangles, etc are measured in microseconds)*
- CAD translator built in  
*(InSpec comes with a built-in, very easy to use, CAD translator to Import & Export from CAD)*
- Security Levels built-in  
*(InSpec comes with 3 levels of security – Operator, Programmer & Administrator)*
- One software for all Machines  
*(The same InSpec software that is on a MicroVu Automated System can be installed on any Manual Measuring System )*
- Exporting SPC / Excel translator built in  
*(InSpec comes with a built-in ASCII translator to easily export to any SPC package or MS Excel)*
- Extremely Fast / Repeatable Focusing Routines  
*(InSpec contains possibly the fastest and most repeatable focusing routines of any Measuring System out today)*
- Extremely Fast Zoom Stop Changes  
*(InSpec contains possibly the fastest Zoom changes of any Measuring System out today)*
- Automated Light Calibration  
*(InSpec contains Automated Light Calibration which will select the most ideal lighting for a measurement and automatically adjust the lighting as you change magnification)*
- Reports  
*(InSpec contains a built-in Inspection Report Writer)*
- G,D&T  
*(InSpec will perform calculate ANSI G,D&T measurements including, True Position, RFS, MMC, LMC, Concentricity, Roundness, Straightness, Flatness, Profile, Perpendicularity, Parallelism, etc)*
- Built-In Calculator  
*(InSpec contains a built-in calculator that allows you to perform any function that you would normally have to export to Excel right in InSpec)*



## Electronics –

- All MicroVu Measuring Systems are true USB devices
- All MicroVu Measuring Systems use only 1 standard, “off the shelf” USB & 1 S-Video cable.
- Calibration is stored in the machine memory for faster start ups and fewer problems.
- Every Measuring System built contains all Renishaw Touch Probe electronics built right in.  
*(No costly upgrades later to add a Touch Probe. It's truly “Plug & Play”)*
- Every Measuring System built contains all Rotary Indexer electronics built right in.  
*(No costly upgrades later to add a Rotary Indexer. It's truly “Plug & Play”)*
- Extremely Fast / Repeatable Focusing Routines  
*(InSpec contains possibly the fastest and most repeatable focusing routines of any Measuring System out today)*

## Lighting – *(In Real Estate, it's location, location, location & in Vision it's lighting, lighting, lighting)*

- Automated Intensity Calibration / Lighting follows Zoom  
*(Lighting is calibrated. Proper lighting is automatically selected for any measurement and the lighting automatically readjusts itself for any changing condition such as changing magnification)*
- 3 programmable Light Sources – Multi-sectional Surface / Profile / “Thru the Lens” Coaxial  
*All Solid State LED Lighting*
  - 16 sector / multi-angle / programmable LED Ring Light Standard*
  - 40 sector / multi-angle / programmable LED Ring Light Option*
  - Red LED or White LED option*
- Adjustable Angles of Incidence (25° - 90°)
- Focused Lighting *(Choose lighting directed for 1X or 2X Optimization)*
- Individual Segment, Sector, Ring and Fill Controls for Absolute Control of Surface Lighting
- **No blind spots.**  
*(Some other manufacturers contain poor lighting designs where LED's in critical areas are blocked or missing by the Touch Probe or Coaxial Light)*

## Accuracy -

- Calibration Routines – MicroVu's Non-Linear Error Correction Calibration Process uses **576 calibration points** for a 12” x 12” stage all others use **25 points**. The greater the number of points, the more effective and accurate the NLEC becomes.
- Dual Encoders – All 3 axis have dual encoders to increase accuracy and prevent costly “crash” issues.
- Z accuracy (.000050” *repeatability*). In side by side tests @ Gillette for measuring the hone angle on the edge of razor blades, MV had a higher G,R&R than a competitors system with a \$20,000 laser Z option.
- MicroVu has performed G,R&R studies against machines that cost 2 to 3x's that of the Vertex and the Vertex has won hands down on accuracy and repeatability. We would be more than happy to perform a side by side G,R&R against any other machine any time.
- Self- Aligning Servo Drives with Dual Encoder all 3 axis
- Monorail Design for drive side stiffness. Same design used on the highest accuracy machining centers.



## Completeness of System –

- There is only 1 version of MicroVu InSpec software that contains all Vision and Touch Probe tools. There are absolutely no surprises after the sale. Other companies offer multiple versions of their software with still yet additional modules that are needed.  
*(A company in Elgin had to spend an additional \$30,000 for software upgrades, additional modules & various retrofits after purchasing a competitor's machine to be able to measure their parts)*
- All machines made are “Plug & Play” touch probe ready.  
*(All Renishaw electronics and wiring was designed right onto the boards and is built right into every machine)*
- Touch Probe Kits are complete with every component needed to fully utilize the Touch Probe.  
*(Calibration fixture, all styli, star probe, docking ports, etc are included in every kit)*
- A CAD translator is built right into InSpec to import or export to any CAD software.  
*Most other companies charge additional.*
- Exporting to a SPC package or Excel is achieved in a few keystrokes.
- Report Writing / G,D&T / 3D CMM Tools are built in.

## Versatility –

- InSpec software is available for both Manual & Automated machines and can be retrofitted to any manual machine to speed up measurement and increase accuracy / repeatability.  
*(InSpec Software for Manual Measuring Machines is almost identical to the Automated version and can be up to 12.5 x's faster than using a conventional DRO)*
- Simple DRO Mode for quick measurements as you would make with a basic Optical Comparator.

## Service –

- All service comes out of our office. If an emergency arises, we can usually have a Service Engineer to a customer within 24 hours.
- No exurbanite travel charges to fly a Service Person in from another state for Service.
- Over 1,000 MicroVu machines installed within our territory.

## Organizations –

- ATI is a 20 person organization with full time Technical Support in house. Some other organizations carry 2 lines and only have 2 sales people who are always busy selling and cannot provide the same level of support after the sale.
- Over 100 years of combined experience in CMM's, Metrology & Metallurgy.
- Free phone support anytime during regular business hours.
- Free support for Inspection solutions @ our facility anytime after a sale.  
*(Bring parts and drawings by any time and we'll be happy to work together on a solution to tough measurement problems)*
- Minimal charge for additional On-Site training or Inspection Program Writing @ your facility, if desired.



**ASSURANCE Technologies, Inc.**

**ISO 17025 ACCREDITED**

Web Site: [www.ATIQuality.com](http://www.ATIQuality.com)

Hopefully this answers many questions. I would be more than happy to discuss any item in detail.

Please call if you have any questions.

Sincerely,

*Kenneth J. Losacco*

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*PS: Please feel free to use the following checklist to perform a true comparison of any other machine that you may also be evaluating with the MicroVu.*

*Once you have completed your comparison, we feel confident that the comparison will show the MicroVu to be the absolute best choice.*



## Vision System Comparison Checklist

Software	Micro-Vu	Other
No Screen Flipping, Everything Visible from Main Screen Schematic, Camera, Program, & Results	Yes	
Easy To Edit Features, Inputs, Tools, Lighting, & Zoom	Yes	
Review and Edit Tools from Cached Images Before and After Part is Removed!!!	Yes	
All Software is 3D – No up-selling or surprises	Yes	
Free Updates, Low Cost Upgrades	Yes	
“Move Here” – Live, Tools, & Schematic	Yes	
Fast, Repeatable Focus	Yes	
Fast Zoom Stop Changes	Yes	
Simple to use CAD Import / Export Included	Yes	
One Version of InSpec for All Machines	Yes	
Multiple Security Levels Included Operator, Programmer, & Administrator	Yes	
Automated Multi-Placement Calibration	Yes	
Large Data Set for Calibration/Verification	Yes	
<b>Touch Probe Option</b>	Yes	
Same Software - Less Training	Yes	
Easy and Thorough Calibration	Yes	
Flexible Probe Configuration	Yes	
Kinetic Mount Fixtures to Prevent Damage	Yes	
<b>Computers</b>	Yes	
Separate from Machine	Yes	
Frame Grabber is the Only ‘Special’ Card	Yes	
Reduced Downtime for Repair	Yes	
Upgradeable in the Future	Yes	
<b>Lighting</b>	Yes	
Automated Intensity Calibration	Yes	
Uniform Light (no LEDs blocked by coax light or TP)	Yes	
Individual Segment, Sector, Ring, and Fill Control	Yes	
Aligned to Points of the Compass	Yes	
All LED Lighting - Red for B&W, White for Color	Yes	
Angles of Incidence of 25-90°, 1x/2x Optimization	Yes	
<b>Electronics</b>	Yes	
Micro-Vu Amplifier and Control Boards	Yes	
Vertex and Excel Systems are USB Devices	Yes	
Calibration in Machine Memory – Fast Start Up	Yes	
Standard Cables - USB and S-Video	Yes	
<b>Mechanics</b>	Yes	
All Servo - Fast, Small, Smooth, Closed Loop	Yes	
Spread Bearings Pads for Accuracy	Yes	
Robust Primary/Secondary Rail Design	Yes	
<b>Other Points</b>	Yes	
Local Sales, Installation, Training, Calibration	Yes	
Low Cost of Ownership Training, Calibration, Maintenance	Yes	
Complete Product Line, Manual and Automated	Yes	
Full Size Range, 6x6 to 48x60	Yes	