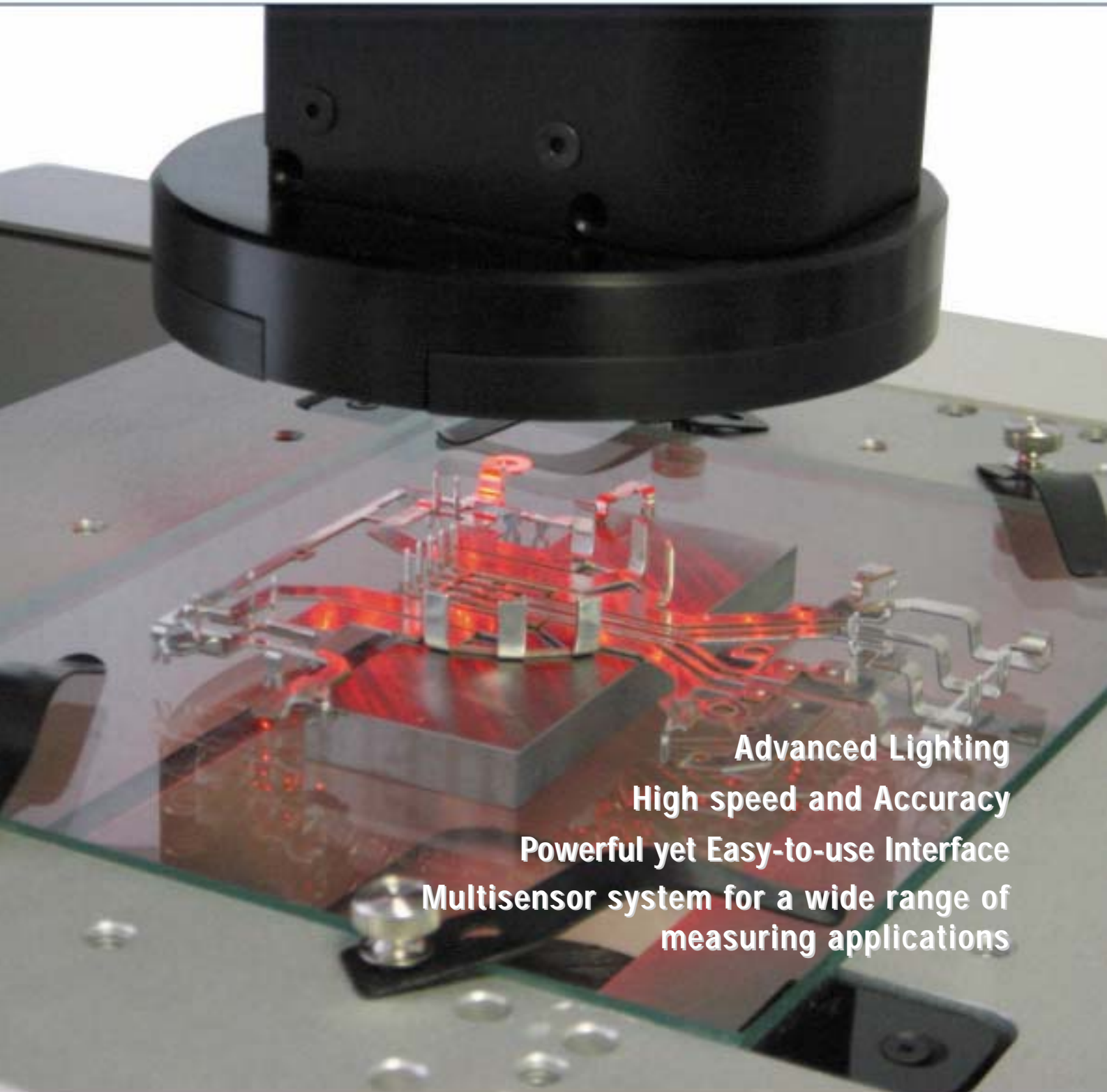


# VERTEX Serie



**Advanced Lighting**  
**High speed and Accuracy**  
**Powerful yet Easy-to-use Interface**  
**Multisensor system for a wide range of measuring applications**

PRECISION MEASUREMENT SYSTEMS

# Serie VERTEX

The Vertex Measuring Center™ is capable of a wide range of measuring applications.

Advanced mechanical design results in high speed and accuracy. State of the art electronics feature USB communication and machine memory. Inspec for Windows metrology software provides a simple interface for advanced measuring tools, tolerancing, translators and reporting.

Lighting options enhance edge definition while updated focus algorithms provide quick Z measurements with excellent repeatability. Optional touch probe increases system capabilities.

1. Two stages sizes :

Vertex 100 : 200 x 150 x 150 mm

Vertex 300 : 300 x 300 x 150 mm

2. Multisensor system : video - touch probe with docking station (optional)

3. Inspec Vision metrology software

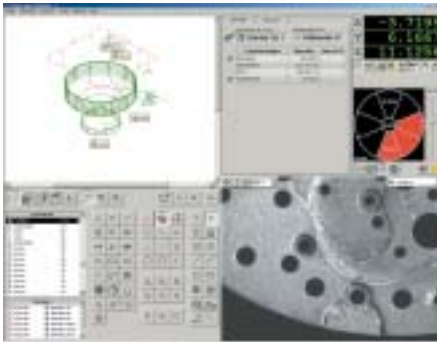


4. Programmable zoom lens  
Hi-Res B&W or color video  
Programmable and long  
life LEDs Lighting

5. Computer console (optional)

6. Heavy duty steel stand (Optional  
with granite basis)

# Feature Highlights



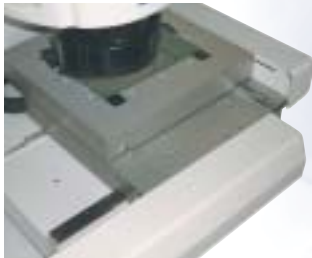
## Inspec Metrology Software

- Powerful Yet Easy-to-Use
- A single graphic user interface
- Adaptive vision tools
- High speed scanning
- Point and click programming



## Technologies

- USB 2.0 connection
- 3D measurement optical sensor - touch probe
- Windows 2000 or XP Pro
- DSP Technology and on-board memory
- Hi-Resolution B&W or color video



## Mechanics

- High accuracy
- Drive side Stiffness
- Low maintenance
- Granite base optional



## Optics - Lighting features

- 12x motorized Zoom Lens, Magnification 7x to 800x
- 3 types of LEDs lighting systems : profile (Backlighting), surface (ring light) and Axial (Thru-the-lens)
- Programmable lighting (type, strength, direction, incidence), with automatic adjustment according to the zoom level
- Intuitive onscreen controls : ring, sector and segment selection

## Ring Light

- Standard, controls 2 rings, 8 sectors and 16 segments
- Optional, Macro Ring light to enhance difficult-to-see edges, controls 5 rings, 8 sectors and 40 segments



# Inspec vision

- Easy to Use Software
- Advanced focus routine
- Advanced LED Lighting
- Superior edge detection

**Summary Window**  
Configurable to display only the properties desired. Quick check for in or out of tolerance condition

**Large Schematic**  
Updates as features are measured

**DRO**  
Shows instant results for manual crosshair measurements

**Lighting control**  
Easy adjust all light sources to meet application needed

**Instruction List**  
Displays the measurement program and the constraints for fast and easy editing

**Large video Image**  
Displays live image, view measurements live, save image for reports

Property	Actual	Output
Length	10.000	
Width	1.254	

X: -75.0485  
Y: 20.4360  
Z: 8.6397

**Inspec Vision™** for windows is a powerful 32-bit Metrology Software application. The software can utilize fast USB, plug and play communication between the measurement machine and computer. The system has been designed to be an integral component of your inspection and measurement lab.

**Inspec Vision™** seamlessly integrates Camera and Touch Probe. Add CMM capabilities to MicroVu vision systems.

**Inspec Vision™** for windows combined with technologically advanced staging, electronics and lighting, results in our most powerful measuring system. Inspec for windows makes it easy to measure parts, generate reports, gather data for SPC, check geometric tolerances and more. It provides you with state of the art vision processing tools, automated operational guidance, and a familiar Microsoft Windows user interface. Now you can measure your parts with ease and confidence.

# Feature Highlights

## METROLOGY

### Graphic user interface

To simplify the learning curve Inspec encompasses a familiar Windows interface with graphics, icons, color-coding and both visual and audio feedback.

### Programming

Teach-as-you-go programming means creating and editing measurement routines is as simple as pointing the mouse and clicking.

### Feature measurement icons

Icons are centrally located to expedite programming and editing. Choose from angle, arc, circle, ellipse, gap, line, o-ring, plane, point, rectangle, slot, spline and more.

### Constructions

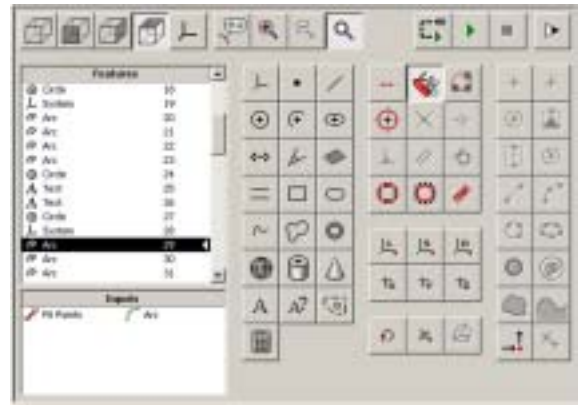
Create intersections, tangents, parallel and perpendicular lines and more. Inspec will only permit geometrically correct combinations. User configurable defaults are available for common construction.

### Tolerancing

Standard ANSI / ISO dimensioning and tolerancing is supported. Operators are immediately notified of an out of tolerance condition.

### File inputs and Outputs

A variety of file formats may be imported to speed up programming. Formats supported include DXF, Gerber, Excellon and IGES. Export data to a serial port, to a network location, or to the local hard drive. Use spreadsheets, databases, reports or SPC programs. Output to CAD for reverse engineering.



## CALIBRATION

Non-linear Calibration capability is included with Inspec Vision for Windows. The calibration routine uses a NIST traceable calibration grid.

## VISION

The edge detection tools accurately locate data points and geometric features from the video image of the part. The powerful, sub-pixel edge detection algorithms allow Inspec to reliably compute accurate measurements at a variety of magnifications. For visual inspection, images can also be captured and saved.

## TOUCH PROBE

Inspec provides intuitive probe assembly interface, automated docking in multi-port probe change rack, automated probe tip qualification including lobing, automated Z scale and Perpendicularity calibration, automatic approach vectoring and solution iteration, automatic retract and adjustable standoff distances.

## LIGHTING CONTROL

The advanced LED Lighting used on Micro-Vu's measuring stages is completely configurable. A simple software interface allows you to click and drag to set light level. The light settings for each tool are recalled during the measurement of the part as programmed.



# VERTEX

Model	110	120	130	310	320	330
X Y Z Measuring volume	200 x 150 x 150 mm (8" x 6" x 6")			300 x 300 x 150 mm (12" x 12" x 6")		
Scale resolution (µm)	from 0,1					
E <sub>2</sub> XY* (µm)	from 1 + 5L/1000					
E <sub>1</sub> Z* - optical (µm)	from 1,2 + 5L/1000					
E <sub>1</sub> Z* - touch probe (µm)	from 1 + 5L/1000					
XY speed	250 mm/s - 10 in/s					
XY acceleration	500 mm/s <sup>2</sup> - 20 in/s <sup>2</sup>					
Z speed and acceleration	100 mm/s - 4 in/s and 200 mm/s <sup>2</sup> - 8 in/s <sup>2</sup>					

Mechanics	110	120	130	310	320	330
External dimensions (mm)	L 760 x P 635 x H 965 mm			L 1090 x P 865 x H 990 mm		
Weight (kg)	60 kg (130 lb)			125 kg (270 lb)		
Capacity (kg)	10 kg (20 lb)			15 kg (31 lb)		
Base Material	Aluminium - Granite optional					
Ways	Unique XY Monorail, Monorail Linear Z					
Motion control	Servo : CNC, Mouse and pendant control					

Optics - Computer	110	120	130	310	320	330
Video	Hi-Res B&W video (with red LED lighting) or Hi-Res color video (with white LED lighting)					
Programmable Zoom	6,5 : 1	12 : 1	6,5 : 1	12 : 1	6,5 : 1	12 : 1
Magnification (1)	0,7- 4,5x	0,6 - 7x	0,7 - 4,5x	0,6 - 7x	0,7 - 4,5x	0,6 - 7x
Magnification with 2x lens	1,4 - 9x	1,2 - 14x	1,4 - 9x	1,2 - 14x	1,4 - 9x	1,2 - 14x
Connection	USB 2.0					
Computer	2.8 GHz, 512 MB RAM, HD 80Go, CDR-RW, Windows 2000 or XP Pro					

Lighting	110	120	130	310	320	330
Illumination source	Long life monochromatic Red LED lighting, option long life white LED lighting					
Lighting	Surface, Profil and Axial					
Surface Lighting	Standard Ring Light (2 rings / 8 sectors) - Macro Ring Light ( 5 rings, 8 sectors)					

\* Accuracy calculated with L in mm, under the optimum conditions using the maximum zoom, on the basis of standard linked to COFRAC.

(1) Vertex 110 and 310 : screen Magnification 20x to 260x - Vertex 120,130, 220, 230 : 15x to 360x

Magnification depends on monitor size and resolution.



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