Mikrosize®

VMA-F

Semi-auto Video Measuring System

Video

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VMA-F Semi-auto Video Measuring System Description

- Z-axis Auto Focus.
- Powerful Measuring Software with auto tracing-edge function,multi-output report
- Sub-pixel segmentation technology improves the ability of image boundary resolution.
- The surface cold light source can be used to measure the complex workpiece.
- With laser pointer ,easy to find the specific location of the measured workpiece .
- Stable Granite workbench with “00” Grade.
- German Made High Precision Polish Rod and Bearing.
- High Resolution Video System.
- Renishaw Measuring Probe is optional for simple 3D purpose.

VMA-F Semi-auto Video Measuring System Application

- It is widely used in machinery manufacturing, electronics, automobile, hardware, plastic, mold and other industries.
- It can accurately measuring workpiece size,shape,position tolerance, so as to complete the tasks of components inspection, shape measurement, process control and so on.

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VMA-F Semi-auto Video Measuring System Specification

Product Name	Manual Video Measuring System			
2.5D Model	VMA-2010-F	VM A-3020-F	VMA-4030-F	VMA-5040-F
3D Model	VMA-2010-FP	VMA-3020-FP	VMA-4030-FP	VMA-5040-FP
X.Y-axis Travel Distance(mm)	200X100	300x200	400x300	500x400
Z-axis Travel Distance(mm)	200			
Dimensions(mm)	600X500X920	750x520x980	1000x620x990	1100x950x1660
Net Weight(KG)	120	150	180	360
X,Y-axis Accuracy(μm)	2.5+L/100			
Z-axis	Auto Focus			
Loading Weight of Working Stage	25kg			
Image Sensor	1/3"Colorful CCD Camera			
Objective Lens	Manual Position Zoom Lens			
Video Total Magnification	Optic Zoom Lens:0.7~4.5x, Objective Lens:20~148x			
Resolution	1μm			
Working Distance(Standard)	92 mm			
Object View	8.1mm～1.3mm			
Movement System	X,Y-axis:Polish Rod, Z-axis:T-type Screw Rod			
Data Processor	RS-100			
Illumination	Surface:8-division LED Cold Light			
	Contour:Adjustable 256-grades LED Cold illumination			
Measuring Software	Mikrosize			
Working Environment	Temperature: 20℃±2, Temperature Variation<2℃/hr,Humidity:30~80%			
	Vibration<0.002g,15Hz			
Power Source	AC 100~220V, 50/60HZ, 10A			

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VMA-F Semi-auto Video Measuring System Packing List

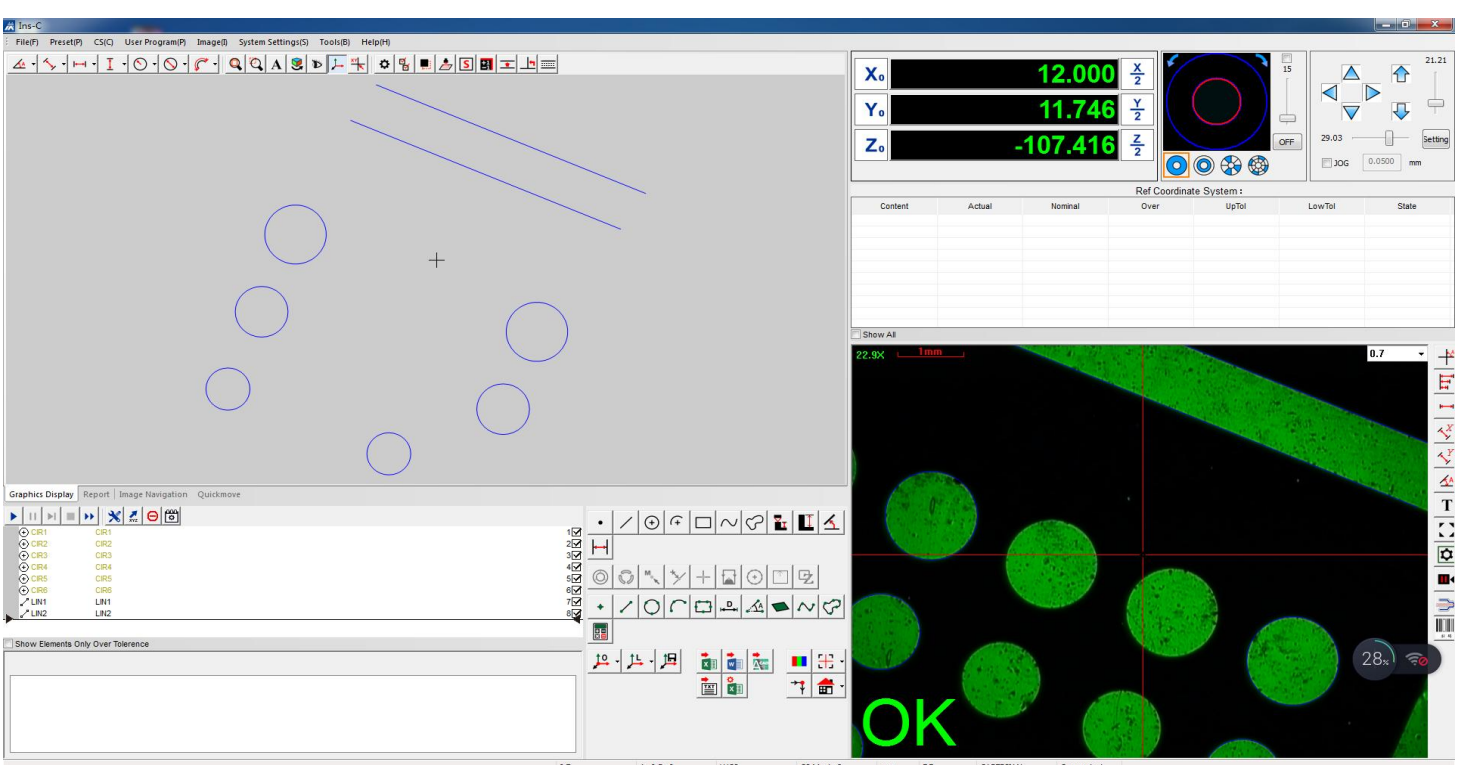
Packing List	Packing List	Packing List
Mainframe/Dell PC System	Zoom Lens 0.7X—4.5X	LED Light Source
RS-100 Data Processor	1/3" CCD Camera	Microsize Measuring Software
Linear Scale	Calibration Block/Capture Card	Instruction Manual/Anti-dust Cover
Z axis High Precision Linear Guide Rail	100mm Length Block(3D)	Renihshaw Probe(3D)

VMA-F Semi-auto Video Measuring System Measuring Software Mikrosize3D

• The Mikrosize 3D-M software with simple interface, intuitive operation, easy operation and powerful functions, users can complete the measuring task quickly and efficiently.

1.Simple and friendly interface

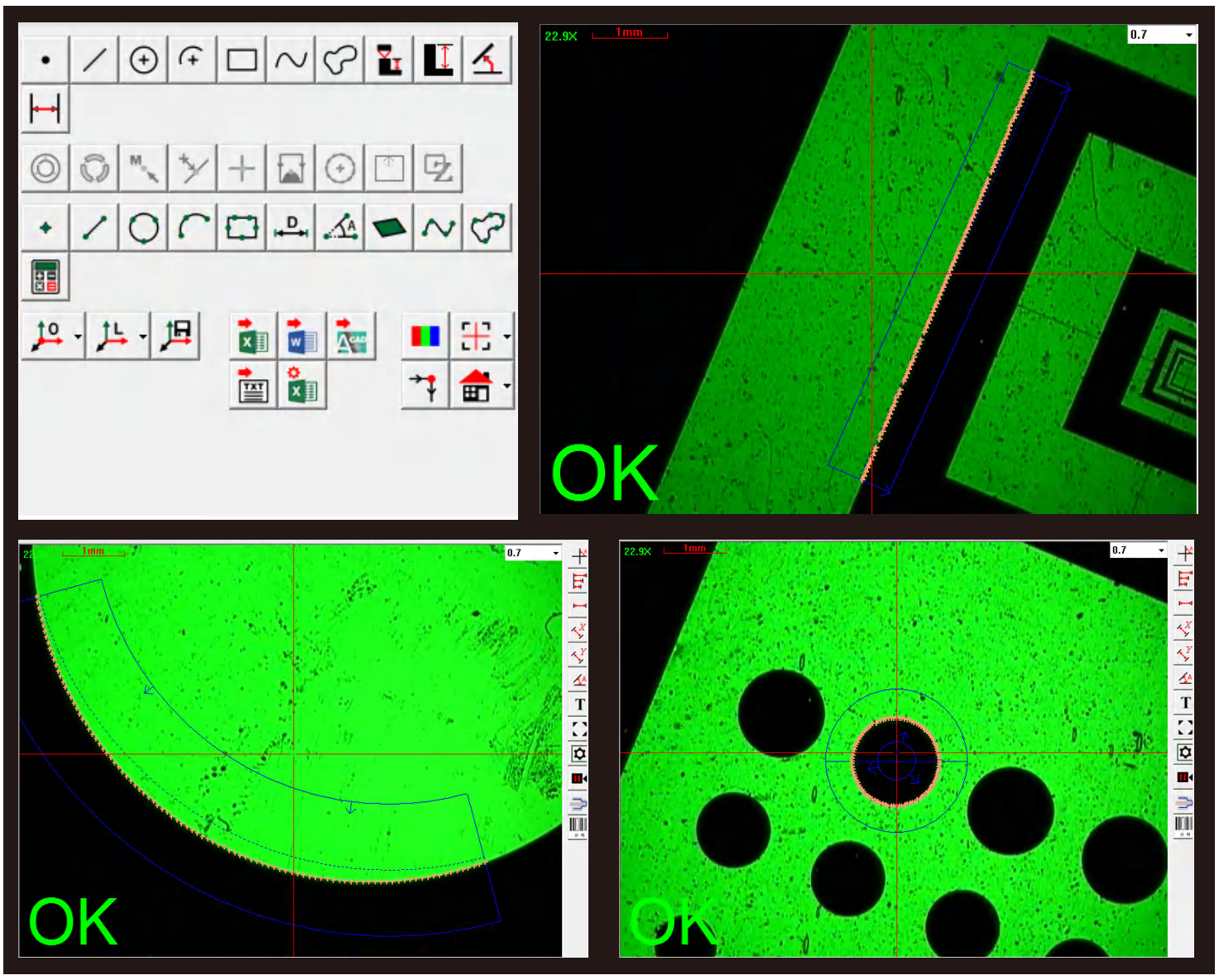
• The commonly functions are in the main interface , which is easy to be familiar with.
• Users can complete almost all measurement task by simply clicking and dragging the mouse.



2.Powerful geometric measurement function

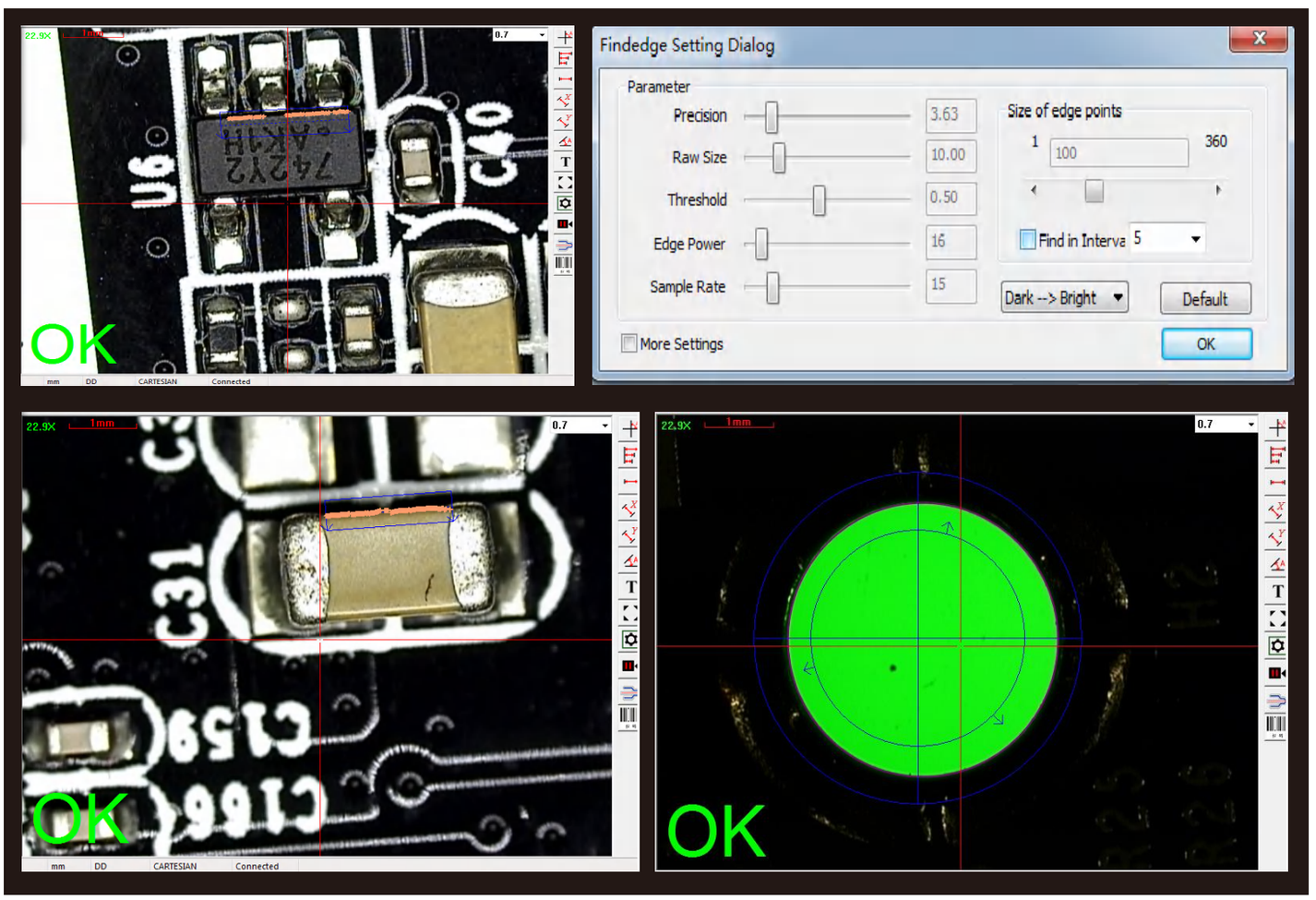
2.1. Complete geometric measurement function

• Measurement of points, lines, arcs, circles, rectangles, ellipses, bond length (waist features), open curves, closed curves, planes, cylinders, cones, balls and other geometric elements.
• When a probe or laser displacement sensor is added to the z-axis, 3D graphic elements such as cylinder, cone, sphere and surface of 3D space can be measured. According to the actual characteristics of elements, each element can be measured by a variety of different methods.
• The coordinate value, length, area, volume and other data of the element can be obtained directly after edge searching.



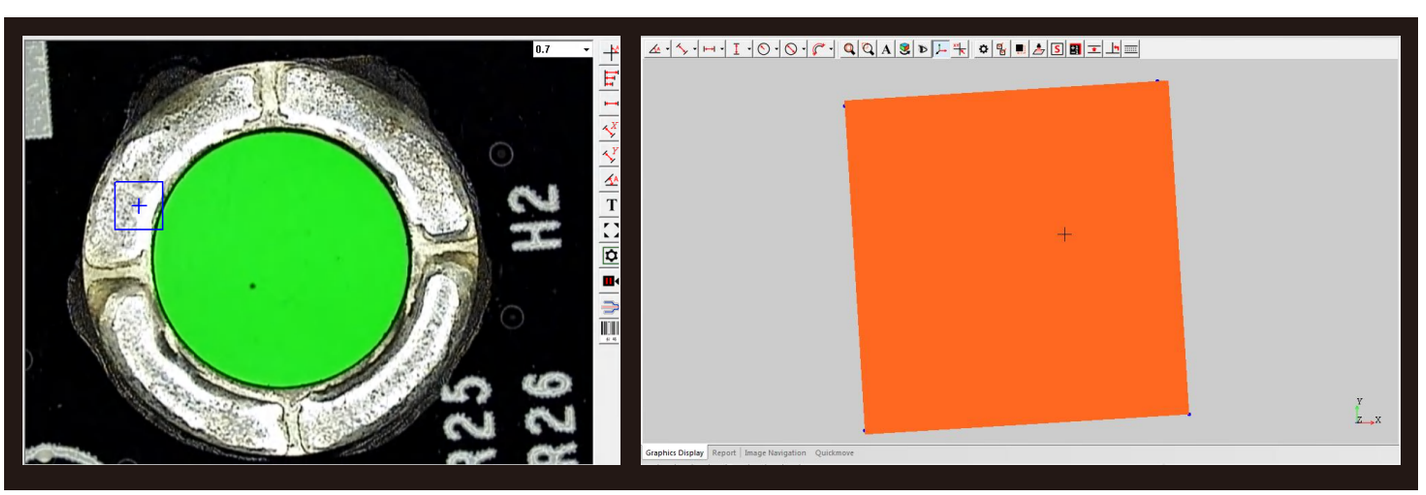
Mikrosize3D Measuring Software

• It can grasp the weak edge, set the edge searching direction arbitrarily, avoid the edge selection error, set the edge searching parameters flexibly, and remove the influence of the rough selvedge.



3. Auto focus function and focus measurement function

• The software can automatically determine whether the focus is the clearest or not. This function can also be used to measure height and flatness.

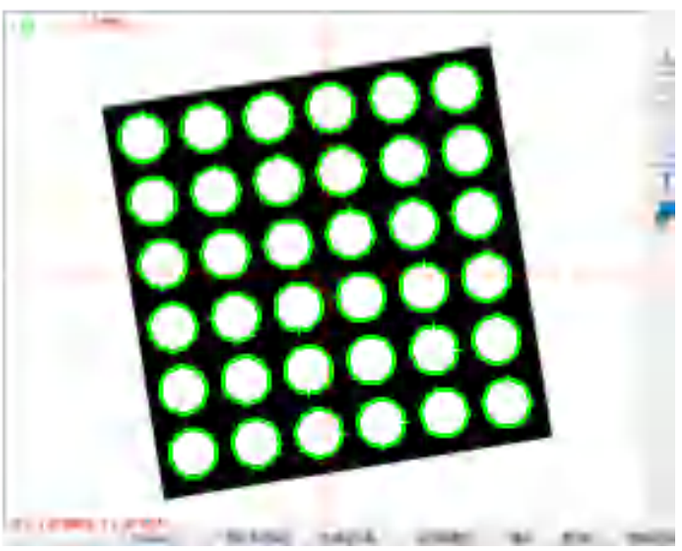


Mikrosize3D Measuring Software

4.Fast response to measurement of complex shape workpiece and mass workpiece (special function of automatic machine)

4.1.Translational array measurement of elements

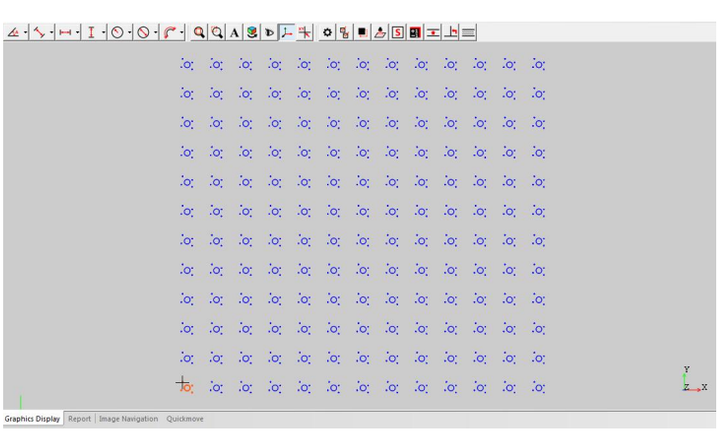
• For equidistant feature elements, only one element needs to be measured manually, and then all elements can be measured automatically through the translation array function, which is very convenient to measure array features.



4.2.Workpiece array and array macro measurement (special function of automatic Machine)

• When a large number of workpieces are measured, only one workpiece can be measured manually, and all workpieces can be measured automatically through the workpiece array and array macro function.

• Whether a single fixture or multiple fixtures can deal with it at the same time. It can save time and improve measurement efficiency.



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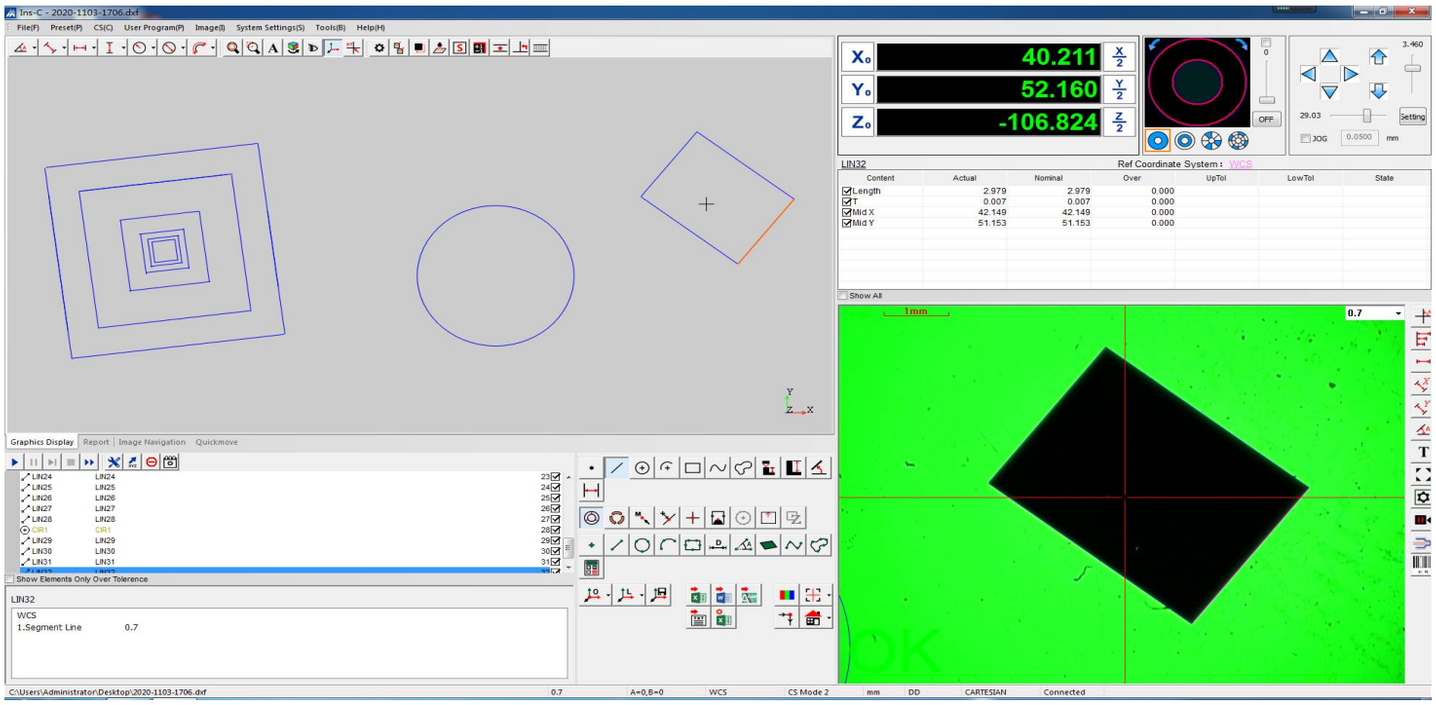
4.3.Import CAD drawing function measurement

• The dimension drawing can be done directly by CAD software, and the automatic measurement can be realized after importing the software, and there is no need to collect points for edge searching.

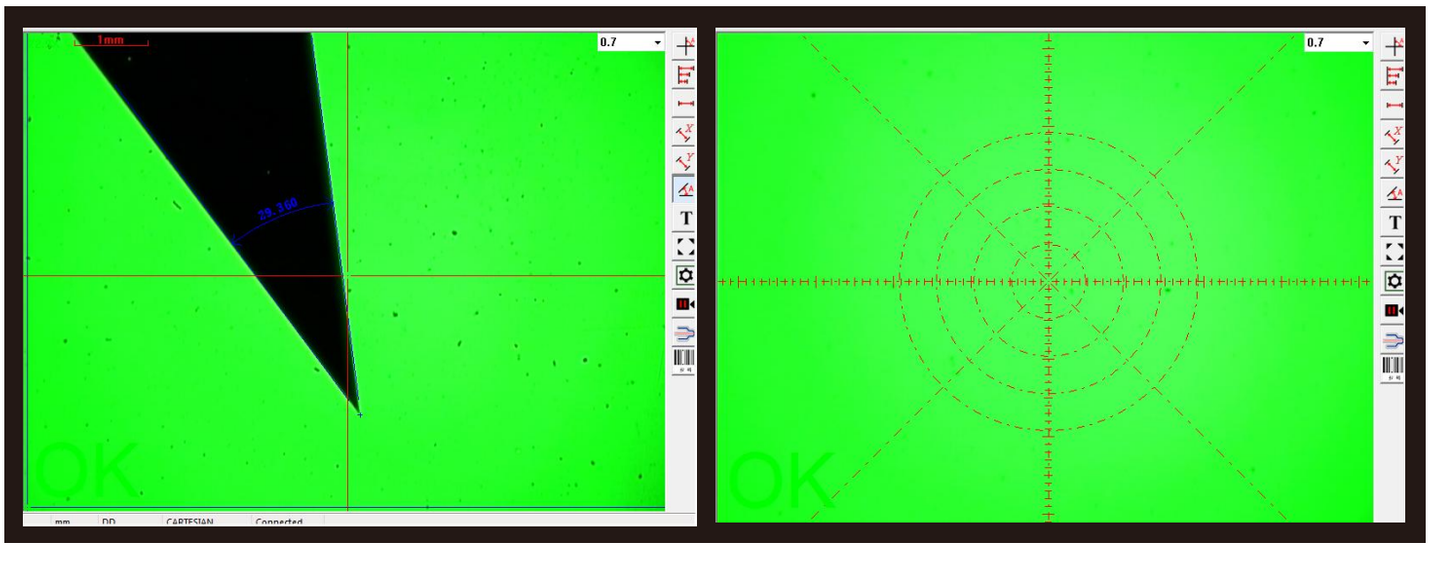
• It is very convenient for coordinate measurement and contour contrast measurement of complex or irregular shapes.



4.4.Comparative measurement function

• The scale line, angle line and standard circle can be preset for comparative measurement of workpiece.

• The dimension line or angle line can also be drawn directly on the image outline,observe the length, angle, step height and diameter of the workpiece dynamically.



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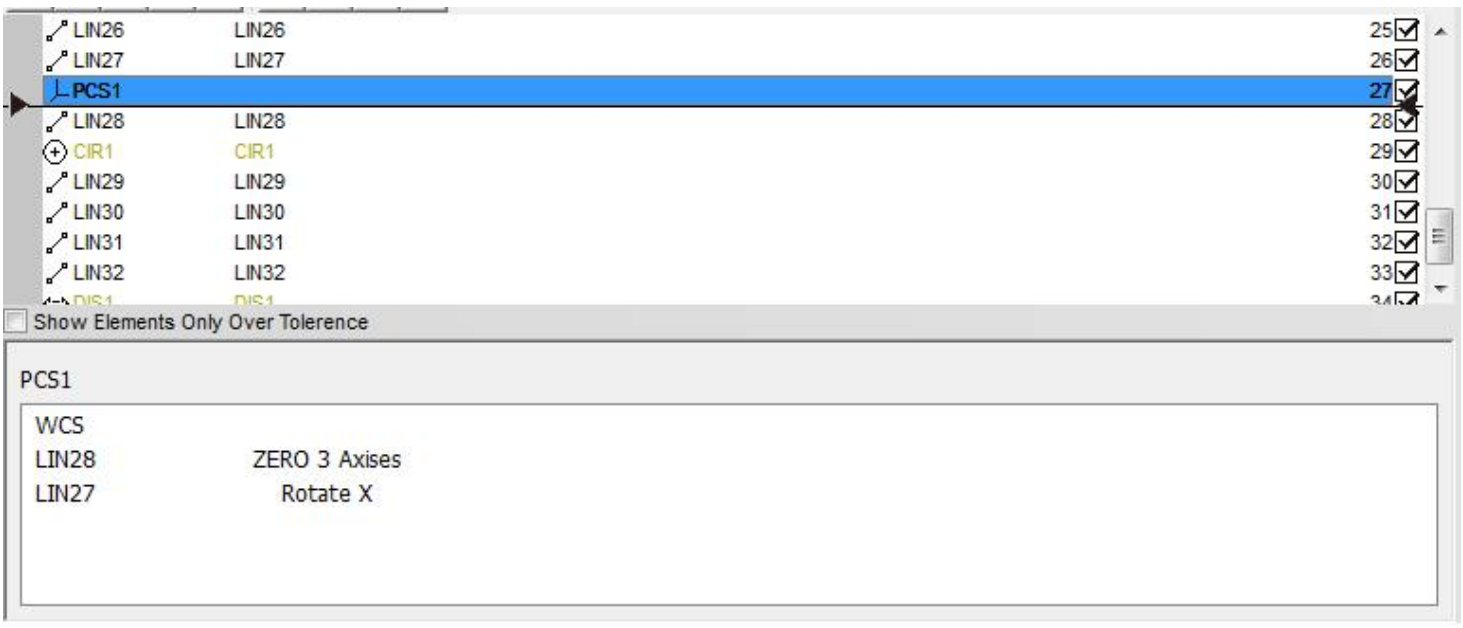
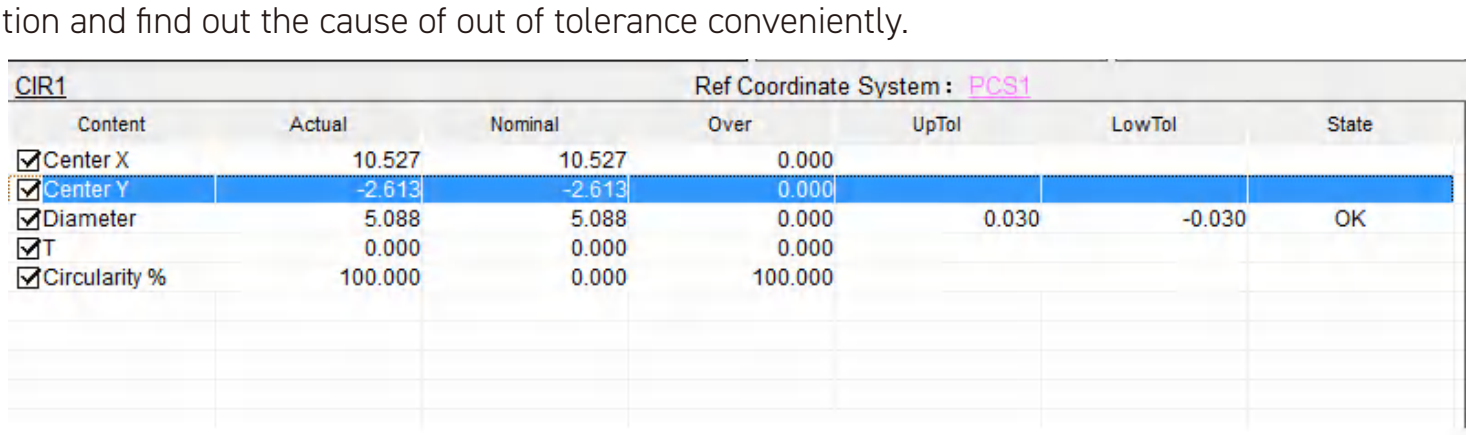
5.Flexible user program

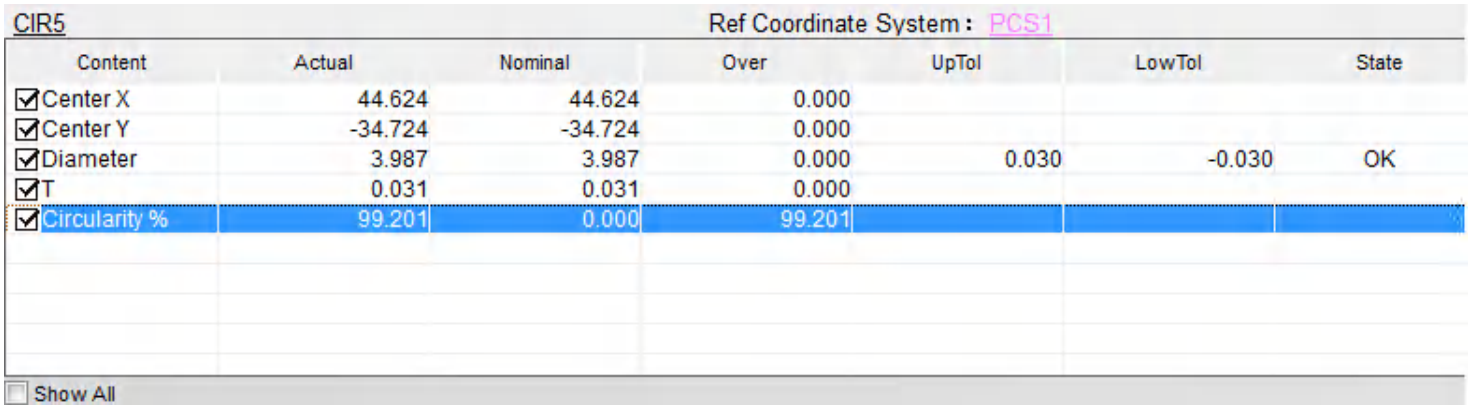
• The software automatically compiles the user program according to the sequence of user measurement steps. And control the program running, stop.
• The user program and each step can be edited, sorted, inserted, deleted , which can adapt to various complex and changeable measurement steps.
• When measuring a large number of workpieces, only one edge finding measurement is needed.

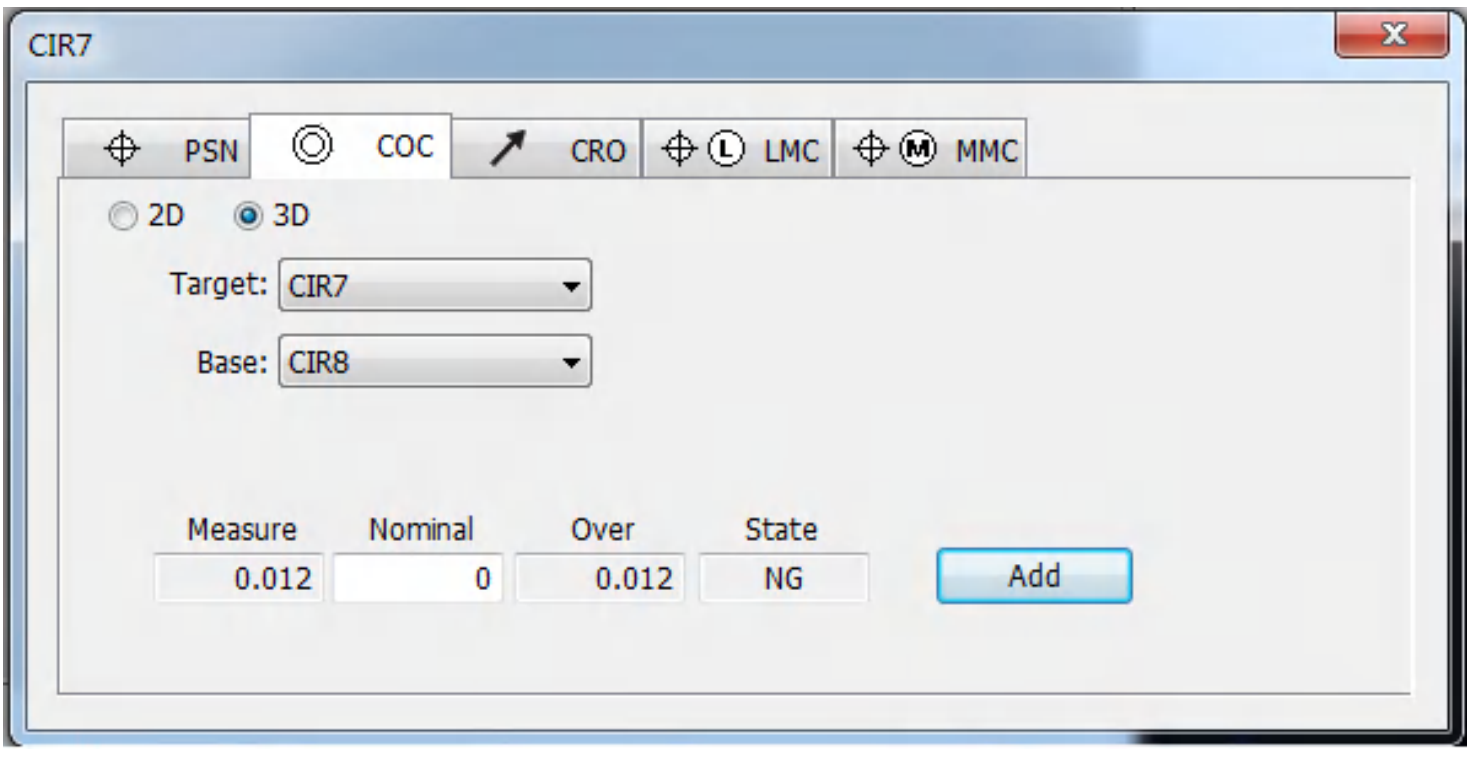


6.Automatic calculation of geometric tolerance of elements

• The software provides complete tolerance setting and calculation functions, which can set and calculate geometric tolerances such as straightness, roundness, flatness, cylindricity, profile, position, parallelism, perpendicularity, concentricity, circle runout, etc.
• It can automatically judge whether the tolerance is OK or NG, and has NG warning and prompt function. The visualized tolerance chart enables users to know the specific out of tolerance position and find out the cause of out of tolerance conveniently.







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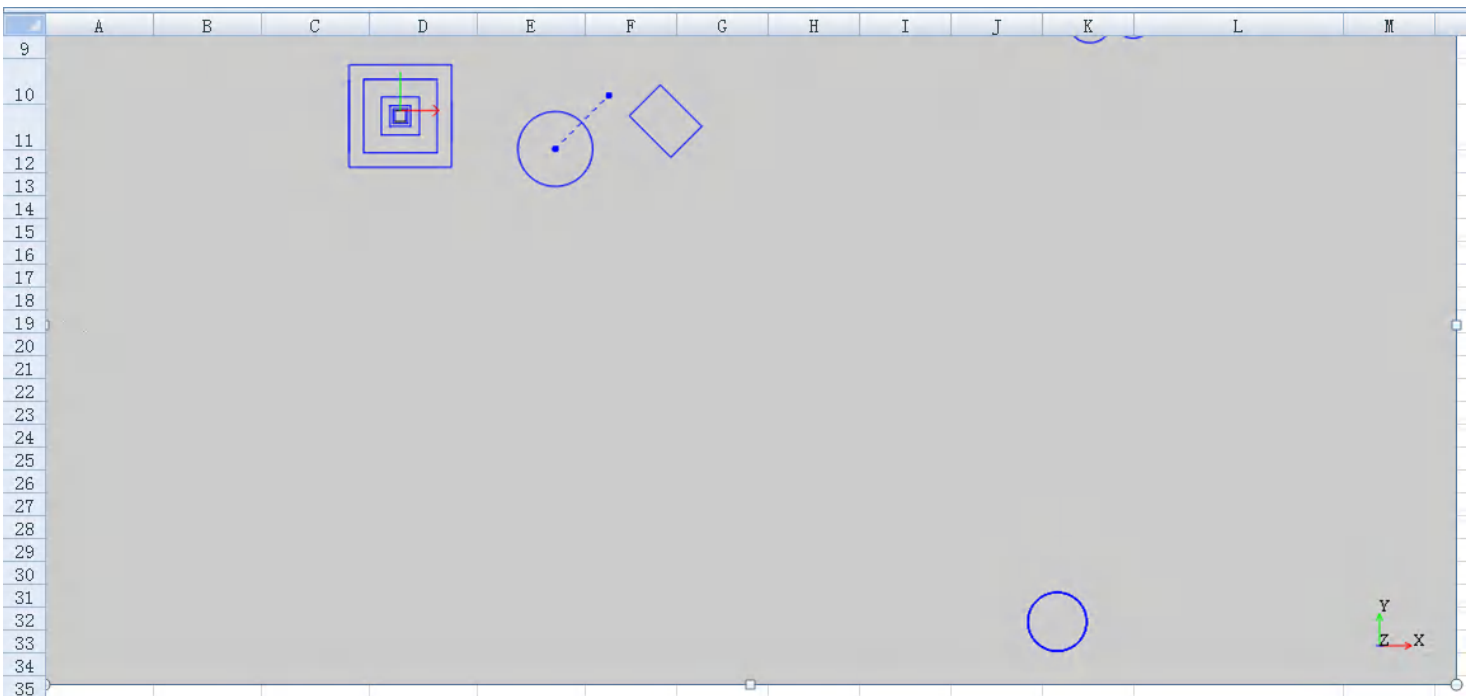
7. Diversified data report and graphic data leading-out function

• The software can lead-out the result data in a variety of report formats, EXCEL,WORD, TXT , and support the excel report format setting function.



Content	CIR2-Diameter	CIR3-Diameter	CIR4-Diameter	CIR5-Diameter	CIR6-Diameter	CIR7-Diameter	CIR8-Diameter	CIR1-Diameter	DIS1-平面距离	OK/NG	Time
Nominal	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148		
Up Tolerence	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
Low Tolerence	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03		
Up Value	3.01	2.564	4.017	4.017	4.017	4.017	4.036	5.118	5.178		
Low Value	2.95	2.504	3.957	3.957	3.957	3.957	3.976	5.058	5.118		
#1	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148	OK	20201103-17:22:11
#2	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148	OK	20201103-17:22:37
#3	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148	OK	20201103-17:22:38
#4	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148	OK	20201103-17:22:50
#5	2.98	2.534	3.987	3.987	3.987	3.987	4.006	5.088	5.148	OK	20201103-17:22:51

• The software can lead-out DXF and IGS format graphics data, and can be directly used in reverse engineering.

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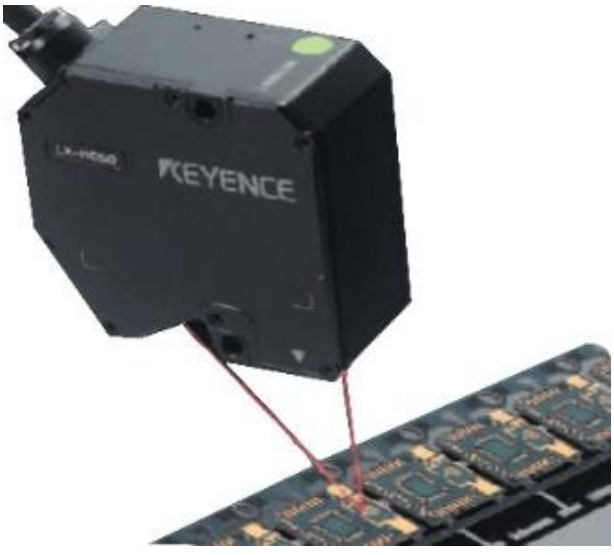
8.Peripheral connection function(optional)

- The software supports the connection of probe, laser sensor, white light sensor, manipulator and other external devices, and can integrate these devices to measure the height and 3D size of workpiece more accurately.