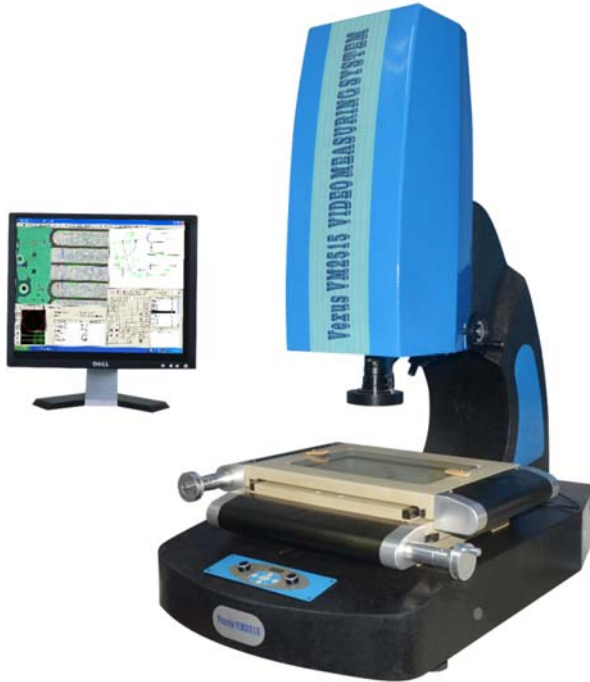


Manual Video Measuring Machine



Characteristics:

- Fashionable shape with stable ark pillar design;
- Adjustable 4-division LED illumination controlled by panel or software;
- 12.5X Detented zoom lens available;
- Obviously assistant laser position system;
- 0.5X and 2X Auxiliary objective are optional;
- UK Renishaw MCP-K series Touch probe and QM3.1 software for 2D Non-contact and 3D contact Measurement;

Specification:

2.5D Model	VM-2515	VM-3020	VM-4030
3D Model	VM-2515P	VM-3020P	VM-4030P
Metal Table Size	408x280mm	458x358mm	558x458mm
Glass Table Size	306x196mm	350x280mm	450x350mm
X,Y-axis Travel	250x150mm	300x200mm	400x300mm
Accuracy	$\leq 3+L/200(\mu m)$	$\leq 3+L/200(\mu m)$	$\leq 3+L/200(\mu m)$
Repeatability	$\pm 2\mu m$		
X/Y/Z-axis Linear Scale	High-precision Linear Scale, Resolution:0.0005mm		
Z-axis Measurement	Manual Type, Measurement travel:250mm		
Video System	5-grades High-definition 6.5X Detented Zoom Lens, 1/3" Color CCD Camera		
Illumination	Contour	Adjustable 256-grade LED Cold illumination	
	Surface	Adjustable 256-grades 4-Division LED Cold illumination	
Measuring Software	Quick Measuring 2.1/3.1		
3D Measurement	3D Module and UK Renishaw MCP-K2 Touch Probe		
Net Weight	350Kg	400 Kg	400 Kg
Dimension(mm)	930x610x1080	930x670x1100	1080x770x1100

Standard Delivery:

Measuring Software	Color CCD Camera	Detented Zoom Lens
Calibration Block	Capture Card	4Division Illumination
Scale Transfer	100mm Length Block(3D)	PC System
Laser Positioning Sensor	Renishaw MCP-K2 Probe(3D)	Operation Manual

Optional Accessories:

Renishaw MCP-K1 Probe(3D)	0.5X Auxiliary Objective	2X Auxiliary Objective	Rotary Table RT3
Renishaw MCP-K3 Probe(3D)	12.5X Detented Zoom Lens	Electronic Zoom Lens	Foot Switch
Rotary Table RT2	Coaxial Zoom Lens	12.5X Coaxial Zoom	Working Cupboard

Measuring Software QuickMeasuring 2.0~4.2 Version

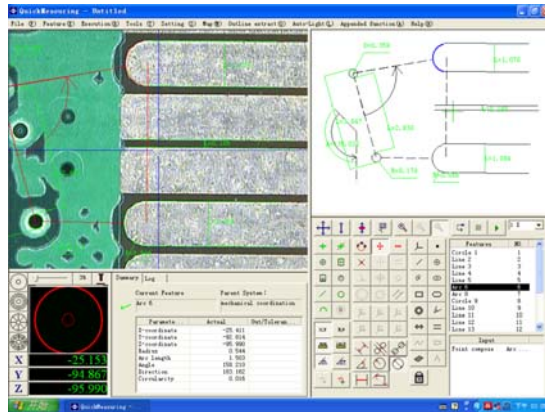
Applications:

Video measuring machines, measuring microscopes and other vision measuring systems,etc.

Modern compact Interface Design:

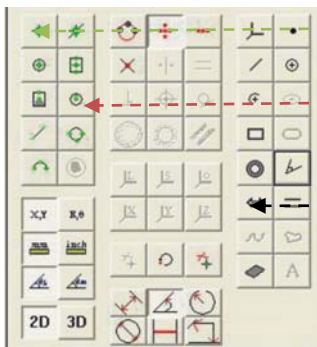
Introduction:

1. Toolbar
2. Video display window
3. Measuring graphic window
4. Illumination control column
5. Measured result display column
6. Measuring tool window
7. Procedure edit window



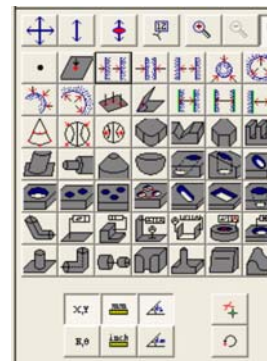
Friendly compact functional key:

Graph functional key, graph constructive Functional Key and Visual tool functional key is separated by color and grouped tactical, makes the communication between Operator and instrument quickly and it improves the speed, and friendly of measurement efficiency obviously.



2D non-contact measurement

- 1.How can we get wanted?
Re:Visual tool functional key column
- 2.Is there any advanced tool to measure more complicated graph?
Re:Graph constructive key column
- 3.What do we want to measure?
Re:Graph functional key column

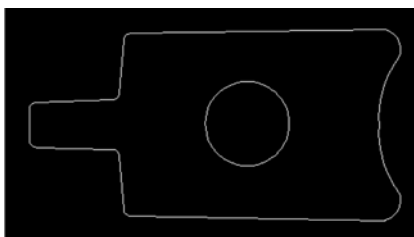


3D contact measurement

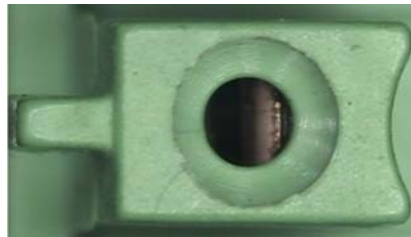
By the touch probe, QuickMeasuring software can make many 3D contact measurement. At the same time, the lively icon can tell you how to do it. For example, point, distance, arc, circle, ball, angle and so on.

Input CAD file and contrast:

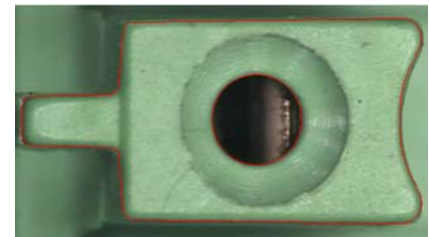
1. Click“DXF“import; 2. Click“Move comparison graph“; 3. Drag mouse and make sure graph and video coincide



CAD drawing



Sample image



Input CAD drawing and contrast

4-Division and 48-division ring illumination make measurement clearer and accuracy:

USB 5-ring,8-direction and 48-division LED illumination provide multi-choice of illumination brightness, which makes the measurement of edge-detect and deeper hole easily. Besides, the illumination condition also can be saved simultaneously while programming in order to realize the auto-control of illumination.

4-division LED illumination is Low-version lightsource for the manual Video measuring machine.

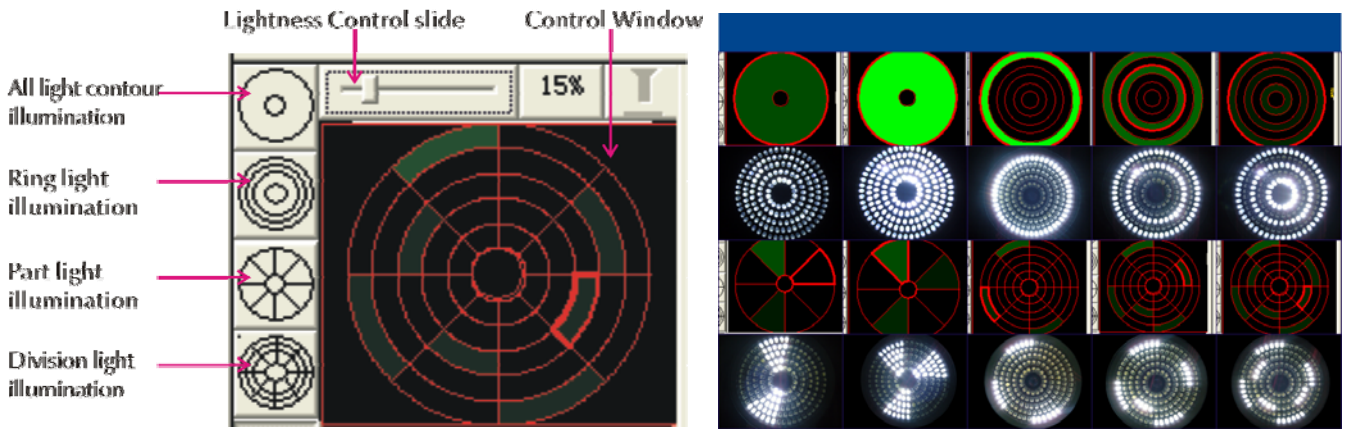
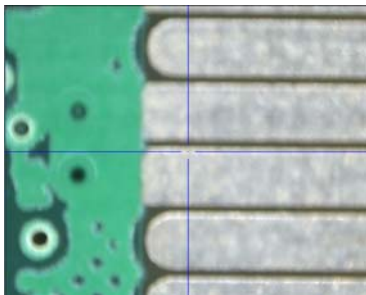
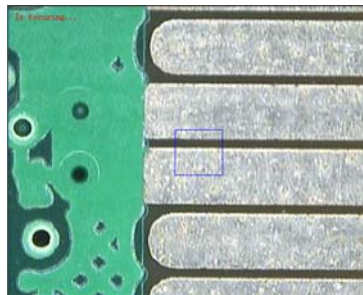


Image auto-focus:

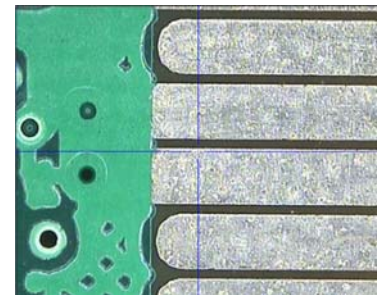
QuickMeasuring realizes entire auto-focus, which reduces the visual error caused by eye-focus and improves the measuring efficiency and accuracy.



Before focusing



Focusing



After focusing

Dimension label function:

Quickmeasuring is able to label dimension with detail data on actual image freely, which reduces the measuring time and improves efficiency obviously. Now, the label is displayed with distance, angle, radius and diameter according, etc.

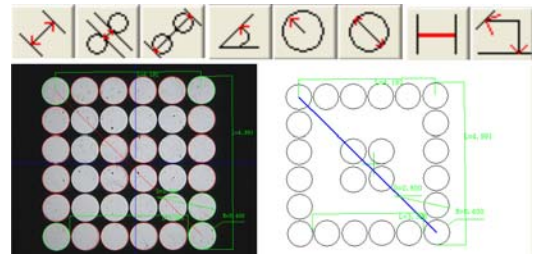
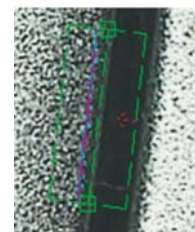
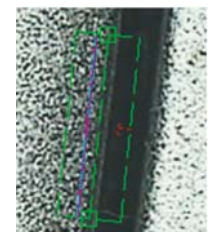


Image sharpening and auto-fringe function:

QuickMeasuring can contrast the image before and after sharpening, and the sharpening make measurement more convenient when check some complicated and uneasy work-pieces. Auto-fringe function makes the whiteness and blackness of sharpened image clearer and edge-detect result accurate.



Before Sharpening



After sharpening

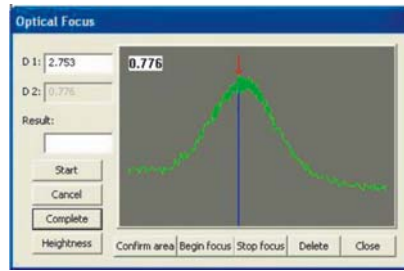
2.5D Non-contact Optical Height Measurement:

QuickMeasuring use auto-focus to achieve accurate height measurement of two plane on manual/CNC Video measuring machine quickly. Through two focusing for different layers of work piece, to obtain height value.

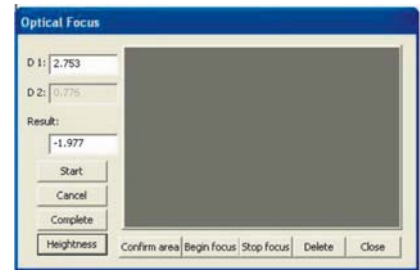
Manual Video measuring machine operation step:



1. Measure one face

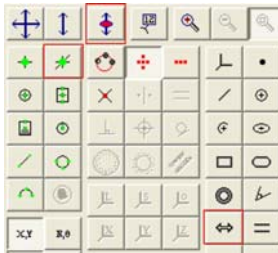


2. Measure another face

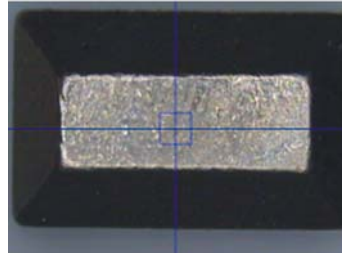


3. Get the height

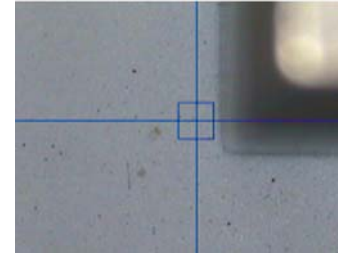
CNC Video measuring machine operation step:



1. Choose Function key



2. Measure one face



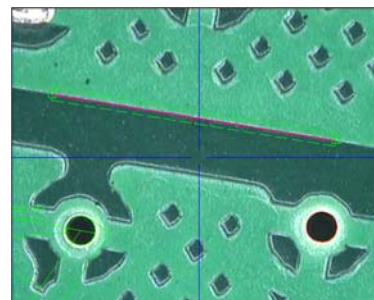
3. Measure another face

Automatic edge-detecting function:

High-speed, accurate and repeatable. While measurements, it can analyze and dispose the work piece and identify work piece edge automatically.



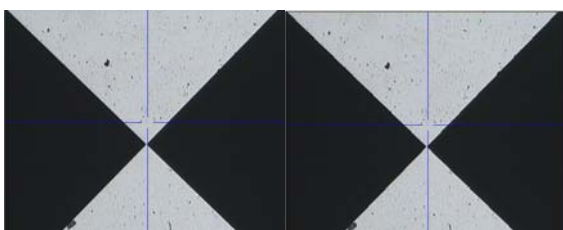
Edge Contour



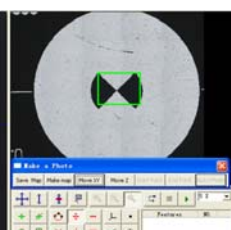
Surface Contour

Map photo & measurement and map navigation:

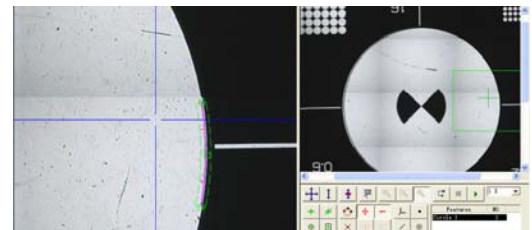
QuickMeasuring can take photos for the work piece on work-stage, then automatically combines segment into a full map-photo, which can be saved and measured, the operator also can use this map-photo to make navigation. While clicking any position of picture, software will quickly move forward the Apposite zone, which largely improves the efficiency of measurement. Besides, the photo-map also can be input again and labeled directly. It is better to use this function on CNC or: suggestion CNC machines.



Map photo



Map navigation



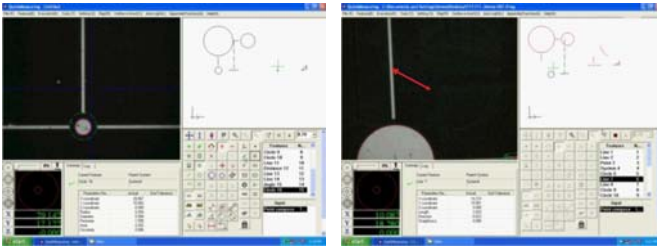
Map measurement

Program simply and directly:

Unlike the traditional measurement programming, Quickmeasuring adopt training style programming, i can record measurement program which can be carried out at any time (measuring order, illumination setup etc). It

is more convenient and quick to measure the same work piece repeatedly.

- Step No.1.Create a coordinate system
- Step No.2.Make a program and save the program;
- Step No.3.Input the program and then auto-run.



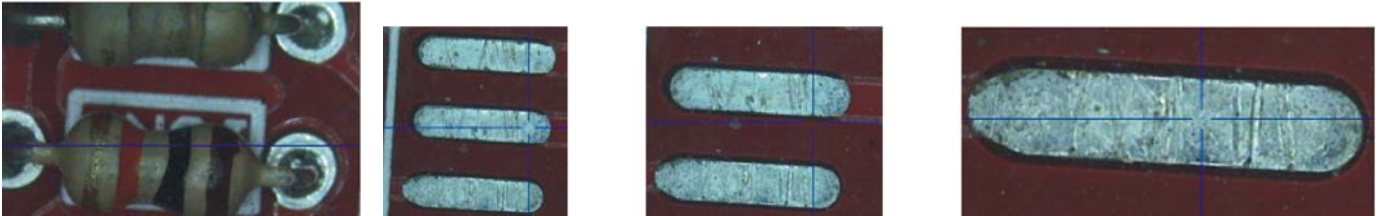
Manual video measuring machine



CNC video measuring machine

Multi-magnification Zoom high-resolution CCD Camera:

High-quality 0.7-4.5x zoom lens select and magnify complicated parts within the visual wide field easily and sharply. High resolution CCD Camera, capture card and monitor ensure the output image without any aberration.

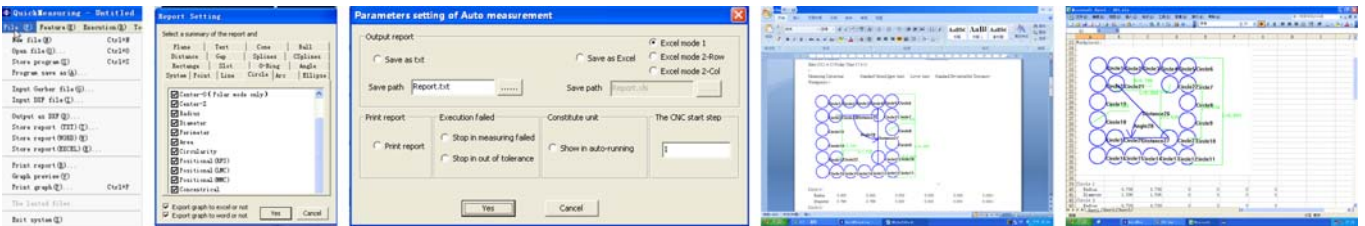


Magnification of Zoom

Min. Max.

Multi-format output:

Measured results of Quickmeasuring can be output in multi-formats, such as TXT,Excel. Quickmeasuring also can input and output the Dxf file, which let the operator make CAD graphic processing easily.



SPC statistical function column

