

### 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:

Specification.						
2.5D Mode	el	VM-2515	VM-3020	VM-4030		
3D Mode	I	VM-2515P	VM-3020P	VM-4030P		
Metal Table	Size	408x280mm 458x358mm		558x458mm		
Glass Table S	Szie	306x196mm	350x280mm	450x350mm		
X,Y-axis Trav	vel	250x150mm	300x200mm	400x300mm		
Accuracy		≤3+L/200(um)	≤3+L/200(um)	≤3+L/200(um)		
Repeatability		±2um				
X/Y/Z-axis Linear Scale		High-precision Linear Scale, Resolution:0.0005mm				
Z-axis Measure	ement	Manual Type, Measurement travel:250mm				
Video Syste	em	5-grades High-definition 6.5X Detented Zoom Lens, 1/3" Color CCD Camera				
Illumination	Contour	Adjustable 256-grade LED Cold illumination				
mummation	Surface	Adjustable 256-grades 4-Division LED Cold illumination				
Measuring Sof	tware	Quick Measuring 2.1/3.1				
3D Mearem	ent	3D Module and UK Renishaw MCP-K2 Touch Probe				
Net Weigh	nt	350Kg	400 Kg	400 Kg		
Dimention(n	nm)	930x610x1080	930x670x1100	1080x770x1100		
•	•		l			

#### **Standard Delivery:**

Measuring Software	Corlor CCD Camera	Detented Zoom Lens	
Calibration Block	Capture Card	4Division Illumination	
Scale Transfer	100mm Length Block(3D)	PC System	
Laser Positing Senor	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

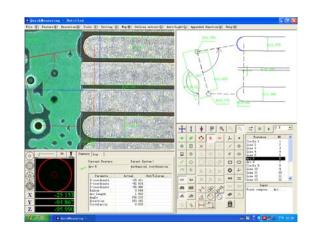
## **Applications:**

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

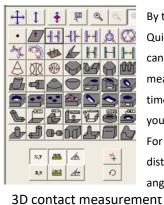


Friendly compact functional key:

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.

	-	*		+		1	-
→ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	۲	•	×		=	1	۲
▲		0	1.	-	9	Ģ	-
	1	0	0	0	11		0
	2	۲	L	15	1	0	6
	x,¥	<b>X,0</b>		jĽ	尾	-	-
		inch				<i>NJ</i>	0
A A A A	4	4.	<u>4</u>	0	7		A

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

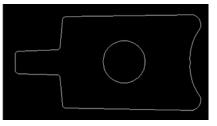


By the touch probe, QuickMeasuring software can make many 3D contact measurement. At the same time, the lively icon can tell you how to do it. For example, point, distance, arc, circle, ball, angle and so on.

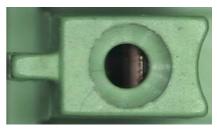
2D non-contact measurement

## Input CAD file and contrast:

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



CAD drawing



Sample image



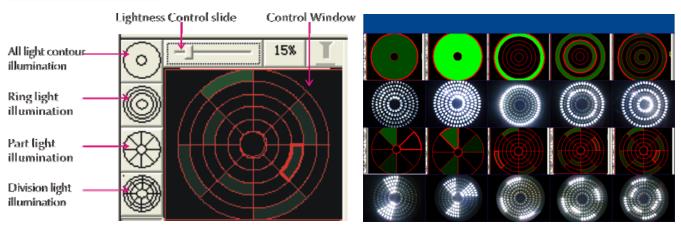
Input CAD drawing and contrast

## 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.

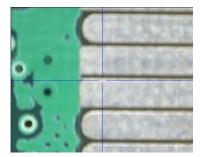
4-division LED illumination is Low-version lightsource for the manual Video measuring machine.

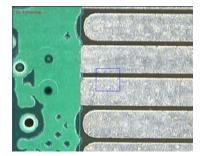




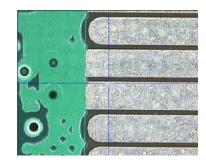
#### Image auto-focus:

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





Focusing



After focusing

Before focusing Dimension label function:

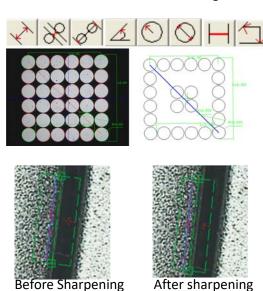
Quickmeasuring is able to label dimension with detail data on actual image freely, which reduces rhe measuring time and improves efficiency obviously. Now, the label is displayed with distance, angle, radius and diameter according, etc.

#### 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 workpieces. Auto-fringe function makes the whiteness and blackness of sharpened image clearer and edge-detect result accurate.

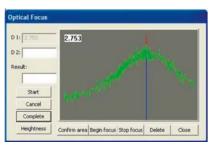
### 2.5D Non-contact Optical Height Measurement:

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:





## Service Call: +86-13711988687

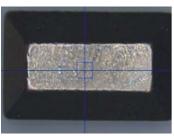


1.Measure one face

## CNC Video measuring machine operation step:

⇔	1	ŧ	<b>P</b>	9	0,	Q
+	*	٢	÷		F	•
۲	•	×	+ +	=	/	۲
	۲	h	\$	9	¢	•
1	0	0	Q.	11		0
1	۲	儿	브	ير	0	6
X,Y	<b>R</b> ,0	<u>jx</u>	jĽ	퇻	\$	=





otical Focus

Start Cancel

Complete

D 1: 2.75

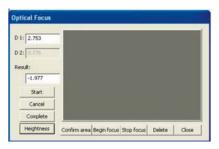
D 2: 0

0.776

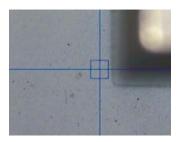
Heightness Confirm area Begin focus Stop focus Delete Close

2. Measure another face

2. Measure one face



3. Get the height



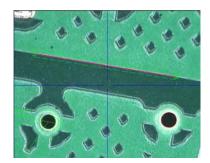
3. Measure another face

## 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.



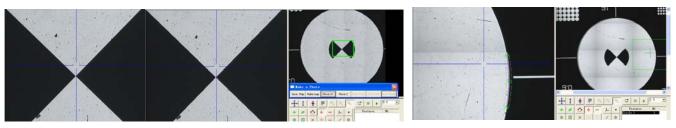
Edge Contour



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 Program simply and directly:

Map navigation

Map measurement

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

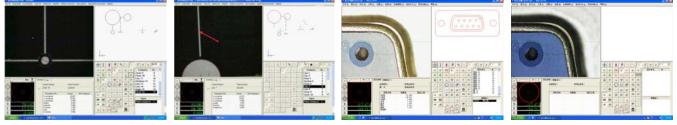


is more convenient and quick to measure the same work piece repeatedly.

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.



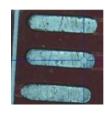
Manual video measuring machine

CNC video measuring machine

### Multi-magnification Zoom high-resolution CCD Camera:

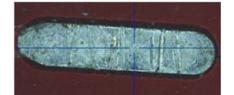
High-quality 0.7-4.5x zoom lens select and magnify complicated parts within the visual wide field easily and sharply. High resolution CCD Camera, capture card and monitor ensure the output image without any aberration.





Min.





Magnification of Zoom

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.

QuickRessuring - Untitled	Report Setting	Parameters setting of Auto measurement	The last the second of the sec	Descent And - Million     Sector And And - Million     Sector And - Million
Frie (2)         Free (2)         Encontinue (2)         To           Rad         file (2)         Cut100         Cut100           Open file (2)         Cut100         Cut100           Drows program (2)         Cut100         Cut100           Fragmen same as (2)         Cut100         Cut100	Select a summary of the report and Plane   Tent   Cone   Bull   Distance   Gap   Splices   Ciplines   Bertage   Sist   D-Bing   Angle   Spring   Faint   Line   Curcle   Arr   Illipse	Output report     Output report     Generation     Generation     Save as Excell mode 1     Save as Excell mode 1     Concellmode 2-Row     C Excellmode 2-Row     C Excellmode 2-Row	Contraction of the second seco	
Input Gerber file() Input DIF file()	Caster-O(fulge ands only)	Save path Report tot Save path Report do	000000	Charlenter Charlenter
Deipei az IIF (). Sezer report (III) (). Store report (OUE) (). Store report (IIII) ().	Dative Disactor Disactor Dational Dational Dative Disactor Dative Disactor	Print report         Execution failed         Constitute unit         The CNC start step           C Print report         C Stop in measuring failed         C Show in auto-running         I		Lanit Appendia Contraction
frint report (2) Graph previce (2) Frint graph (2) Cirl+F	E forthead (07) Forthead (07) Forthead (07) Forthead (07) Constrained	C Stop in out of tolerance		Time to the to t
The leased files Built system (1)	Cancel	Cancel		

#### SPC statistical function column

SPC Function		SPC Window		SPC Function
Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.	Lunti Organ I	Croid A particular         1           Viel 4         1           4         1           5         1           6         1           7         1           8         1           9         1      10 <td< th=""><th>Pelers all Pelers Baser</th><th>SPC data obset         SPC careford           SPC careford despises         SPC detert           Measurement value         Standard           1.427060         0.000000           1.427060         0.000000           1.427060         0.000000</th></td<>	Pelers all Pelers Baser	SPC data obset         SPC careford           SPC careford despises         SPC detert           Measurement value         Standard           1.427060         0.000000           1.427060         0.000000           1.427060         0.000000
• Organization         Design opposition           • Design opposition         Design opposition           • Design opposition         Design opposition	Roderidad Upp Nat I como I como Cotor	A straight of the straight of	Sept to tread	
E Bréféres		Cristiani Calistication	U12=4 (5140)	

and the state of the second					
9Cánacidae): 9Ciettel   9Ciertesidaepais: 9Cánae			Utell	Orign F	
Measurement value	Standard value	The apper limit	The Law lim		
1.847000 1.847000 1.847000	8.00006 8.00008 8.00008	0.00000 0.00000 0.00000 0.00000	0.500000 0.500000 0.500000		