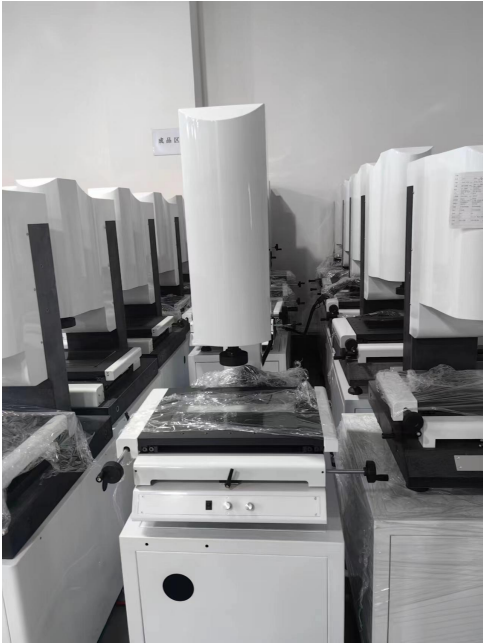


# Manual 2D Vision Measuring Machine



**technical parameter:**

model	2010.X	3020.X	4030.X
route or distance	200*100*200	300*200*200	400*300*200
outline dimension	525*677*980	625*777*1020	725*877*1020
staging mm	360*260	460*360	560*460
Operating weight	220	280	350
Glass	30	30	30
Z axis lifting	200MM		
operating	90 mm		
certainty of	XY (3 + L / 200) um		
Grate size	0.5um		
CCD, resolution	Industrial grade: 800 line hd color CCD optional 900 line. Optional 1.3		
Zoom objective	0.7-4.5X Rice optional pmis		
Total	16-180 times optional 20-220 times		
Partial field of	7-1.1MM		
illuminant	Surface light, contour light: white LED, continuous and adjustable		
source	220 V ± 10%, 50 Hz electrical equipment shall be reliable grounding:		
work environment	Temperature 20°C ± 5°C Temperature change 2°C / hr humidity 30-80%		



**Configuration list:**

class	Core components	characteristic	quantity	unit
main body	Base, column	Shandong Taiqing: marble component	1	cover
	travelling table	High-precision iron casting: upper, middle and lower three layers	1	cover
	The V-type guide rail is the XY	Roller cross guide rail	1	cover
	linear guide rail Z	Taiwan on the silver: high precision grade P grade	1	cover
	polish rod	Solid chrome plating	1	cover
	glass	Wear-resistant and high precision	1	cover
drive-by-wire	grating ruler	Xintian Optoelectronics: 0.5 UM	1	cover
	Lianr	Guiguang: 18-180 times	1	cover
	CCD	Color high definition: 800 lines	1	cover
illuminant	good appearance	Three-ring ring does not partition: industrial welding plate	1	cover
	rim light	The brightness is uniform and continuously adjustable	1	cover
control	controller	Grayscale: data processing	1	cover
software	software	Research and development of our factory	1	cover
Test and verify	Correcting the film	accuracy 1-2UM	1	cover
fulcrum bearing	table	High weight bearing 500-800 KG	1	cover

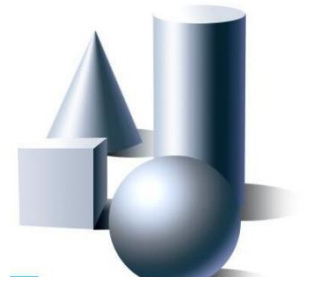
**computer configuration:**

1. Special hand motor: industrial control	
CPU	The Intel G18404-generation dual-core 2.8G processor
motherboard	Industrial control B85 motherboard
internal storage	Industrial 4G 1600 of memory
caliche	Industrial solid-state 128G hard drive
Case power supply	The Great Wall power supply is the Jinhetic machine box
The keyboard mouse	Rio Tinto set
indicator	A 21.5-inch monitor
system	Win7:32 bits

### Secondary element characteristics:

Using the optical principle, the non-contact test measurement;  
Applicable to all fields for the purpose of two-coordinate measurement;  
It is the best measurement solution for small, thin, soft and components;  
Can achieve accurate measurement of points, lines, circles, Angles, and other elements;  
And has a powerful report output function, high quality, economic, practical;

**Two dimension: measure all plane dimensions;**  
**2.5 dimensions: measure partial three dimensions**

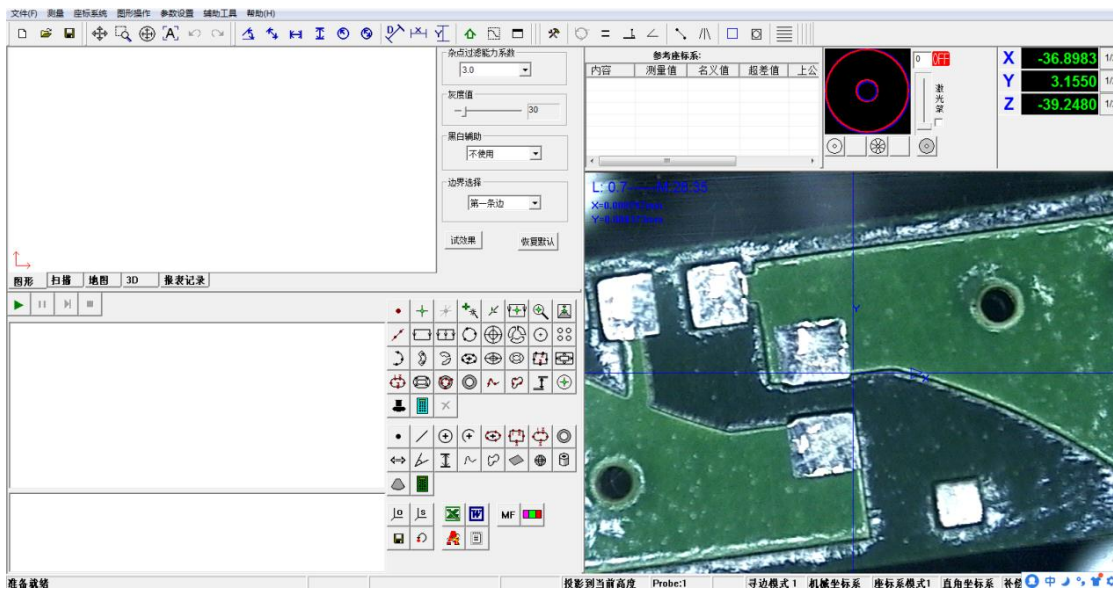


### Hardware, Main Features:

Precision transmission equipment design for fast movement.  
High precision marble base, the column frame is stable and reliable.  
Precision P-grade linear guide rail and V-type guide rail, with extremely high linear, Ensure the machine accuracy and service life.  
Color CCD, with a higher definition measurement picture.  
Contour light, surface light, coaxial optical (optional) flexible lighting, high definition, accurate measurement.  
Precision optical ruler, crucial per 1 micron.

### High-end software: Best advantage introduction:

- 1, excellent software architecture design, software algorithm industry first-class, stable and reliable, support various languages, exported to overseas, rest assured to use.
2. Precision compensation: surface complement three horizontal and three vertical, to ensure the accuracy of each position, Z axis perpendicular compensation function, so that the XYZ three axis win.
- 3, super edge search algorithm, to ensure the accuracy of edge search. There is no software enemy in this edge-finding feature industry.
4. The manual machine is equipped with programmable software to realize the automatic measurement of the image area, the arrow indicates the next measurement direction, and the hands only need to move the machine, No secondary software editing is required. Reduce manual fatigue, free hands, let you experience flying general measurement.
5. Powerful measurement results show that the tolerance setting, professional, independent SPC statistical analysis software, strong dominant position.



## High-end software: Basic function introduction:

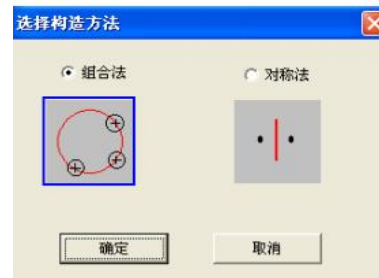
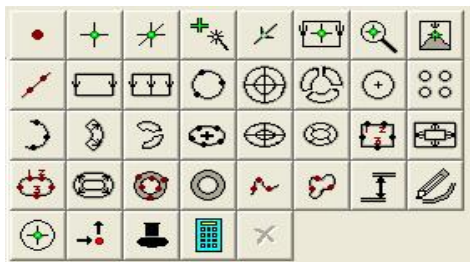
The following software is a concise description, if you need to detailed the function description, there are additional parameters.

1、 Complete variety of measurement elements: can directly measure 12 elements.

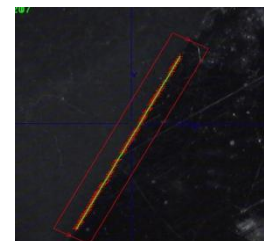
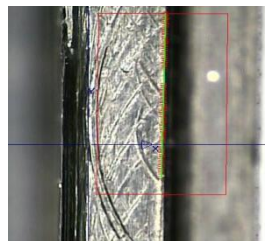
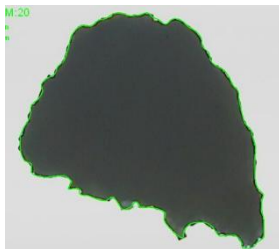
Point, straight line, circle, circular arc, ellipse, rectangle, groove shape,  $\odot$ -ring, distance, Angle, open cloud line, closed cloud line.

To measure the circumference, area and center of gravity of the closed cloud line, using the triple interpolation algorithm, which is the most accurate method for measuring the cloud line.

The more sampling points, the more accurate, the planness and cone angle can be measured through the image.



2、 Super edge search algorithm to ensure the accuracy of edge search. In the following figure below, the periphery of the straight line has many shadow parts. The imaging edge is not clear, so the edge of the line can be found accurately.



- 3、 Macro measurement function: The macro measurement function is to associate some measurement and construction commands to a button.
- 4、 Automatic discrimination measurement: automatic identification line, circle, arc.
- 5、 Element structure: The element structure is powerful. Elemental structure provides 10 structural methods: translation, rotation, extraction, combination, parallel, vertical, vertical, mirror, symmetry, intersecting, tangent construction of geometric elements. Element construction makes it easy for users to cope with some elements that are difficult to measure, thus improving work efficiency.

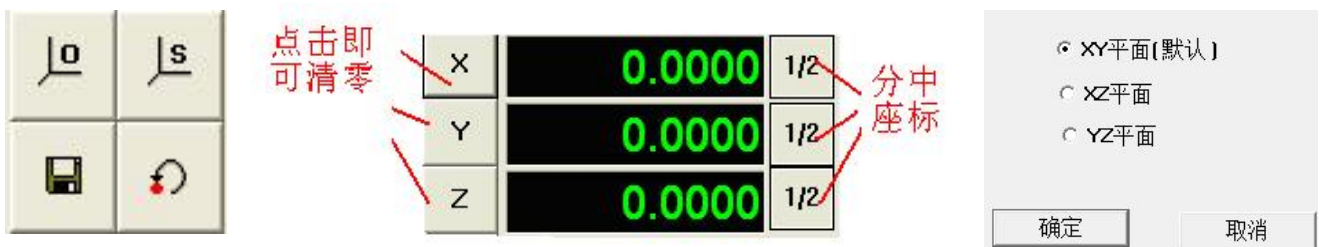


CPL 1	
内容	测量值
X坐标	5.8432
Y坐标	-25.7072
周长	22.5504
面积	24.2789
位置度	0.0000
测量点数	179

6、The display results are rich, the super-poor red warning can display the optical magnification and the screen magnification, and can display a pixel equivalent to how many mm.



7. Can establish a multiple workpiece coordinate system:



8. Convenient and quick way to establish user programs:

9, edit and modify the user program, intuitive and convenient.

10. Manual measurement can be conducted during the machine automatic measurement

11. When running the user program, the data can be automatically aligned into the Excel, and the data can be automatically imported into the professional SPC software.

When measurement fails or fails, intelligent processing can be performed.



## 12. Image height measurement function

With accurate focus and fast focus capabilities, you can measure height values through focus, or through autofocus to get the current point seat. You can also set whether to conduct autofocus when running the user program.

## 13. Auxiliary dimming, annotation function and system error correction:

The software has a systematic error correction function. At present, linear, section compensation, verticality error compensation, Z-axis straightness error compensation, lens center offset error compensation, glass ruler surface compensation, panel surface compensation and lens distortion compensation can be performed. The following figure is the systematic error compensation menu.

14, tolerance: perfect size tolerance calculation capacity. The default tolerance band can be set to meet the national standard of the shape and position tolerance calculation ability, super poor can automatically alarm, and with red warning. The following figure shows the dimension tolerance input dialogue of the circle

15, DXF file import programming (also known as offline programming, manual software common mapping comparison), DXF file 13 import generation user program completed.

16, language conversion: can be directly language conversion, easily change the software into other countries' language, without the need to change the software.

17, online SPC software: provide independent, professional SPC software for measurement data follow-up processing measurement software and SPC software seamless connection.

18. Help system: to provide a complete help system. Help users unfamiliar with the software to quickly master the software.

### **Function summary:**

**Manual and automatic imaging instrument: using optical principle, non-contact test measurement; solve all plane dimensions.**

**Applied to all fields for two-coordinate measurement; it is the best measurement solution for small, thin, soft and components.**

**2.5 dimensional optics: Z axis with grating ruler, image measurement height, to solve the measurement can not touch the products: such as silica gel, soft plastic.**

**2.5 dimensional band probe: including two dimensional, 2.5 optics, all functions. The installed probe plane measurement is perfectly combined with the 3 D measurement requirements to complete 70% of the function of the three coordinates. Really two-dimensional, three-dimensional switch at will, collocation use.**

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