Rational WANHAO

ssa
For Metallurgy & Metrology Solutions
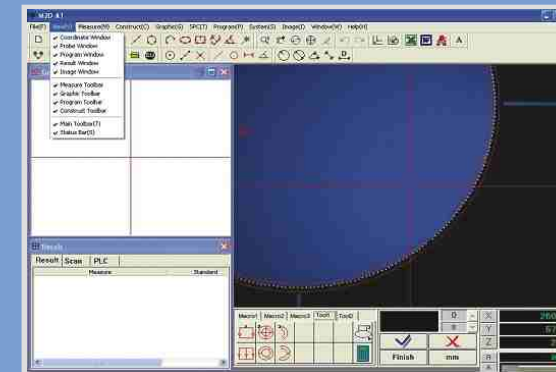
Video Measuring System

CNC vision Systems are designed to meet diverse requirements for measuring very thin, small, and complex or delicate components such as IC lead frames, precision engineering and rubber or polymer components. Repetitive jobs to support mass production can be executed with great speed and ease with programming and fixtures.

▶ Dual closed loop control, the motor can locate the position with high precision during high speed motion.

▶ PC based Control connects to PC by USB cable and S video Cable. Embedded module for table - cross travel control

▶ LED lighting 24 isolated groups Lamp House. Continuos light intensity adjustment in 200 levels.

▶ M2D CNC powerful windows based software for both machine control and precise geometric measurements.

Specification

Work Table	Table Size	450 x 280
	Glass Area	306 x 196
	Measuring Range	250 x 150
	Z axis Travel Focus	150
	*all measures in mm	
Resolution	0.0005mm	
Accuracy	<= (3+L/75)m	
Motor Control	Motion Speed	100mm/s
	Locating Accuracy	0.001mm
Video System	Navitar Zoom	0.7 X - 4.5 X
	Object View	10.6 - 1.6mm
	Camera	Sony Chip Japan
	Total Magnification	30 X - 190 X
	Option Aux Lens	0.5 X & 2 X

Our Range of Products

● Tool Makers Microscope   ● Microscopes - Metallurgical/ Zoom Stereo/ Stereo   ● Profile Projectors

For Metallurgy & Metrology Solutions

N Non Contact Video Based Metrology provides more detailed data about sample than single point contact systems. The integration with highly accurate positioning , auto edge determination, and powerful 2 dimensional Data processing Software's / hardware's has made Video Measuring Systems one of the most versatile metrology tool.

An excellent solution to the most critical requirements of high quality Optical Profile Measuring. Suitable for measuring different shapes, complicated profiles such as press components, gears, cams, treads, tools, dies, turned components, automats etc. Most effective device to measure most 2 Dimensional parameters like linear dimension, angle.

Vision System
● Navitar Video Zoom 0.7 - 4.5   ● Magnification 30 - 190 X   ● Sony ½ Inch CCD System   ● Granite Base

Specification

	VMS 2010	VMS 3020	VMS 4030
Table Size	404 x 228	500 x 330	606 x 466
Glass Area	260 x 160	350 x 280	450 x 350
Measuring	200 x 100	300 x 200	400 x 300

Z Axis 150 mm
Accuracy X & Y Axis (3+L/75) μm
Resolution 0.001   *all measures in mm

Objectives

	Video Meg	Object View	Working Distance
0.5 x (Optional)	15x - 95x	20 - 3.2 mm	175 mm
Standard	30x - 190x	10 - 1.6 mm	92 mm
2.0 x (Optional)	60x - 380x	05 - 0.8 mm	36 mm

LED Based Illumination

Illumination has proven to be one of the most important components when designing a successful Vision system. Rational Vision Systems are integrated with LED based Bright Light coaxial illuminators and Ring Light, to provide powerful, even illumination across a given field of view. LED lighting provides variable intensity bright white light illumination

Benefits of LED-Based Illumination over traditional fiber based illumination systems:

● Longer life   ● Minimum power loss   ● Narrow wavelength band (red), constant color temperature (white)   ● Small packaging with optimal heat management   ● No fan vibration   ● Lower cost

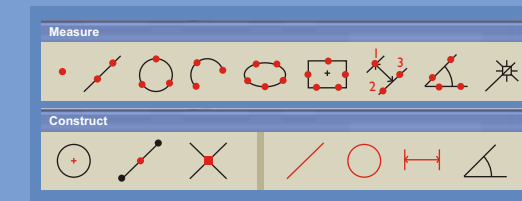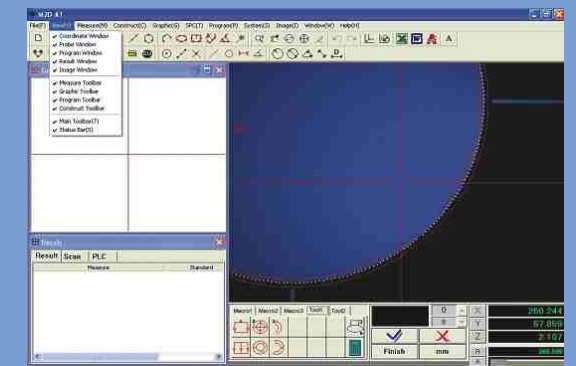## DC 3000 - Multi Function Data Processor

● Measure , Preset and Construct elements   ● Line, Circle, Angle, distance, rectangle and soon   ● Axis Skew function   ● Optional Foot switch   ● Polar & Cartesian Coordinate system   ● Data Storage   ● Part Programming

M2D AT Software:

Multi-Window display and easy operation. Automatic edge-detection 2-Axis geometrical measuring functions 2D Parameters like Line, Circle, Angle, distance, rectangle etc.
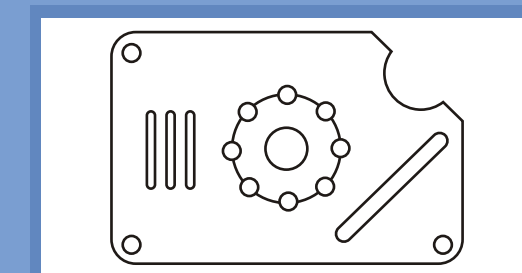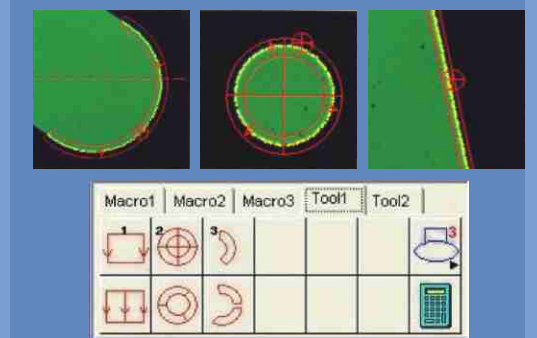
Focus Indicator - can precisely determine Z axis. Windows 2000/XP Vision tool equips edge-trimming, output the most precise data. Excellent graphic allows to save, print out, and transfer to CAD

Easy to Use ICON based measuring tools for both Measurement and construction of geometric parameters.

Measure Line Circle, Arc, Eclipse, Rectangle, Angle etc. Construction of Circle center, Mid Point, Distance, Intersection etc

● Auto edge Detection
● 4 Modes of edge detection
    ❖ Manual   ❖ Semi-Auto
    ❖ Fully Auto Cursor   ❖ Fully Auto Central
● Edge Detection at the Click of Mouse
● Tools like Circle, Rectangle, Arc etc
● Parameters like Circle by part selection of Arc
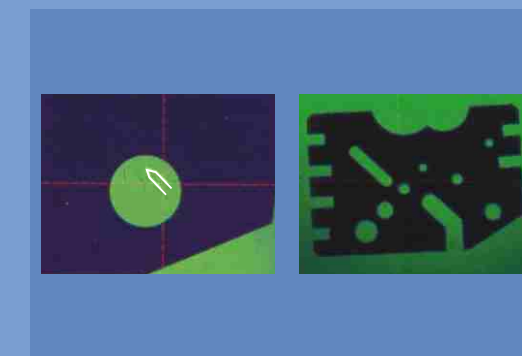● Focus Indicator for Z-axis Measurement

Graphic Window
    ● Live Graphic Window
    ● Construction of Parameters from objets in Graphic Window
    ● Display of Dimensions
    ● Print the Graphics

Skew & Origin Setting   Simple & Direct Function
Data Transfer - One Click Data Transfer to AUTOCAD, WORD etc

Scanning 2D Graph
    ● Point Scans 2D profile in a easy one key operation and stores in DXF File. Easy Processing in AUTOCAD.
Programming:
    Programming make's repeat jobs easy, fast and avoids the need for constant supervision of engineers. All Calculations are done by program, operator is guided by the direction indicator to the next parameter.
Built in basic SPC module help analyze batch jobs