



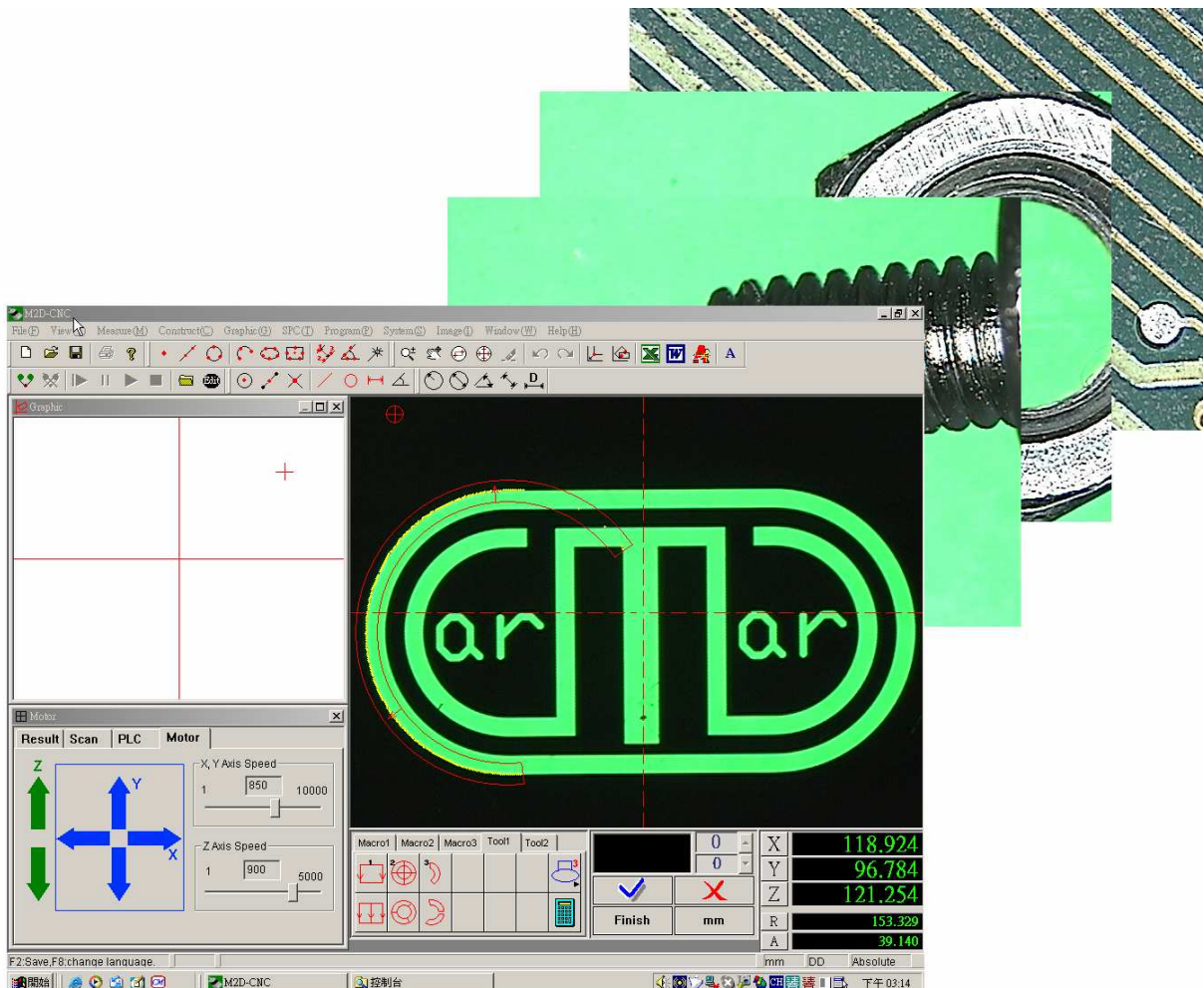
CARMAR TECHNOLOGY CO., LTD.

All Series Video Measuring Machine

VMM series are one of the best developed products in Carmar's product lines. Providing customers with precise, cost effective equipments and good service are our business philosophy. VMM series satisfy all kinds of two dimensional measurements (2.5D for reference) with powerful software.

All series designed with granite structure.

- ☐ Cantilever CNC Type VMM-C/E series
- ☐ Cantilever Manual Type VMM-S/D series
- ☐ Bridge Type VMM-AM/E series



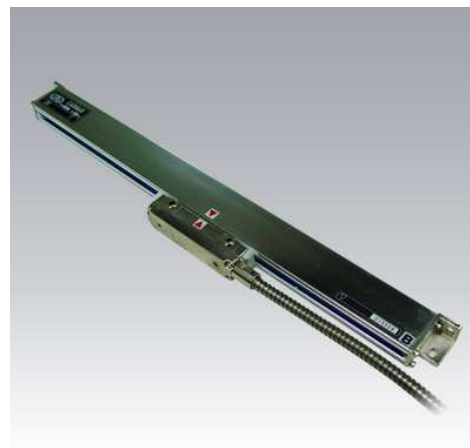


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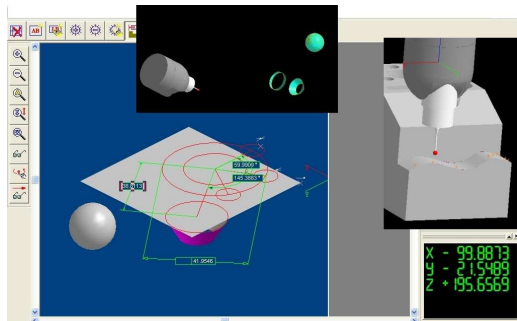
All New Features

■ Leading technology of applying linear encoder with $0.5 \mu\text{m}$ resolution to enhance accuracy of the positioning and graphic gathering.

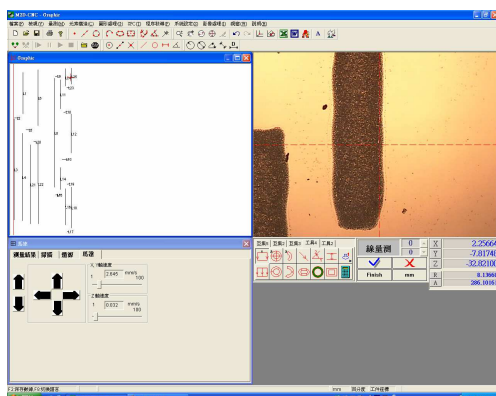
X	3.8720
Y	12.2995
Z	61.3630
R	12.8946
A	72.5255



■ Powerful versatile probing module to support 2D and 3D measuring to offer total solution.



■ Powerful zoom lens with high resolution linear encoder to provide accurate micro image inspection for precision parts.





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CNC Type Video Measuring Machine

Features:

1. Support Auto focus function, joystick and touch probing system;
2. High accuracy with fixed working table and granite pedestal;
3. Apply embedded Guga controller for servo motor controlling increases the speed of motor responding;
4. High resolution Sony 1/2" color CCD camera and NAVITAR Zoom lens;
5. Supplied with USB interface linear exchanger to connect with professional measuring software;
6. Surface cold-light source is used to enhance the performance of illumination
7. Applying MS Windows XP with Carmar's CNC measuring software ensures the best performance.
8. Auto focus function is available for VMM-3020C and VMM-4030C only.



VMM-3020C



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VMM-C Series Specifications :

Model		VMM-2515E	VMM-3020C	VMM-4030C
Metal Table's Size (mm)		450 x 280	500 x 300	606 x 466
Glass Table's Size (mm)		306 x 196	350 x 280	450 x 350
Travel (mm)	X	220	270	370
	Y	120	170	270
	Z	150 (for focusing)		
Driving System		Servo Motor Control		
Speed		50 mm/s		
Resolution of X/Y/Z-axis		0.0005 mm (0.5 μ m)		
Positioning Accuracy		0.001 mm (1 μ m)		
Indication Error of X/Y axis		$\leq 3.0 + L/75$ (μ m)		
Software		QIM-5008		
Video System		CCD Camera : SONY Color 1/2" CCD Camera Lightening System : Cold-light source Surface and Transmission illumination Zoom Lens : NAVITAR Zoom Lens , Magnification of field lens : 0.7X - 4.5X Total Magnifications : 30X - 190X Object View : 10.6mm - 1.6mm		
Weight (kg)		145	170	270
Power Supply		AC220V/110V 50/60 Hz		

Function-enhanced options as below , please refer to accessories of video measuring machine.

■ **Standard Zoom Lens Option**

■ **Precision Zoom Lens Option**



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Cantilever Manual Type Video Measuring Machine

Standard VMM-D Series
Enhanced VMM-S Series

VMM-S/D series are one of the best developed products in Carmar's product lines. Providing customers with precise, cost effective equipments and good service are our business philosophy. VMM series satisfy all kinds of two dimensional measurements with M2D software.

Features:

1. High accuracy with fixed working table and granite pedestal;
2. Supplied with RS-232 interface and working with professional M2D measuring software:.
3. High resolution Sony 1/2" color CCD camera and U.S. made NAVITAR zoom lens;
4. The user can manage and output the graph by connecting with PC and running the M2D program.
5. One-click edge detection.



VMM-2515S/D



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VMM-S/D Series Specifications :

Model	VMM-1510S/D	VMM-2010S/D	VMM-2515S/D	VMM-3020S/D	VMM-4030S/D
Metal Table’s Size (mm)	354 x 228	404 x 228	450 x 280	500 x 330	606 x 466
Glass Table’s Size (mm)	210 x 160	260 x 160	306 x 196	350 x 280	450 x 350
X/Y Travel (mm)	150 x 100	200 x 100	250 x 150	300 x 200	400 x 300
Weight (kg)	100	110	120	140	240
Dimensions (mm)	540 x 560 x 860		760 x 600 x 900		970 x 670 x 940
Z axis travel (mm)	150 mm				
Z working range (mm)	VMM-S series: 92 mm		VMM-D series: 105 mm		
Indication Error of X/Y axis	$\leq (3 + L/75) \mu m$; L: measuring length (mm)				
Digital Display & Resolution of X/Y/Z-axis	Digital Display : DC3000 Resolution : 0.0005 mm				
Measuring Software	M2D series				
Video System	VMM-S series				
	●CCD Camera : Colour 1/2“ SONY CCD Camera ●Zoom Lens : NAVITAR Zoom Lens , ➤ Magnification of field lens 0.7X - 4.5X ➤ Total Magnifications 30X - 190X ➤ Object View 10.6mm - 1.6mm (High precision zoom lens is optional)				
	VMM-D series				
	●CCD Camera : Colour 1/3“ CCD Camera ●Zoom Lens : Sstandard Zoom Lens , ➤ Magnification of field lens 0.7X - 4.5X ➤ Total Magnifications 40X - 255X ➤ Object View 7mm - 1.1mm				
Aiming System	Cross line generator				
Lightening System	Adjustable LED Surface and Transmission illumination				
Power Supply	AC220V/110V 50/60 Hz				

Function-enhanced options as below , please refer to accessories of video measuring machine.

■ **Standard Zoom Lens Option**

■ **Precision Zoom Lens Option**

■ **Touch Probe Option**



CARMAR TECHNOLOGY CO., LTD.

Bridge Type Video Measuring Machine

VMM-AM Series

Bridge type VMM-AM designs with granite structure and guidance of air bearing that provides rapid movement and accurate position for high traverse. VMM-AM is the ideal model for larger LCD and PCB inspection. Working with professional CNC software satisfies various sizes measurements.

Features:

1. High accuracy with fixed working table and granite pedestal;
2. Duo closed loop moving control, the motor can position with excellent accuracy;
3. Apply embedded module for servo motor controlling increases the speed of motor responding ;
4. High resolution Sony 1/2" color CCD camera and U.S. made NAVITAR zoom lens;
5. With Air bearing design for X and Y-axis and table structure of granite ensures geometric accuracy and vibration resistance.
6. Surface light is composed of 24 individual illumination driven by constant current.
7. Applying MS Windows XP with Carmar's measuring software can ensure the best performance.
8. One-click edge detection.



VMM-5030AM



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VMM-AM Series Specifications :

Model		VMM-5030AM
Metal Table's Size (mm)		700 x 450
Glass Table's Size (mm)		550 x 350
Travel (mm)	X	500 (Air bearing)
	Y	300 (Air bearing)
	Z	150 (for focusing)
Resolution of X/Y/Z-axis		0.0005 mm (0.5 μ m)
Indication Error of X/Y axis		$\leq (3 + L/200) \mu$ m ; L: measuring length (mm)
Video System		<ul style="list-style-type: none"> ● CCD Camera : Colour 1/2" SONY CCD Camera ● Lightening System : Adjustable LED Surface and Transmission illumination ● Zoom Lens : NAVITAR Zoom Lens , <ul style="list-style-type: none"> ➢ Magnification of field lens 0.7X - 4.5X ➢ Total Magnifications 30X - 190X ➢ Object View 10.6mm - 1.6mm (High precision zoom lens is optional)
Measuring software		USB301 & M2D-AT
Weight (kg)		800
Power Supply		AC220V/110V 50/60 Hz
Air Supply		Pressure: ≥ 0.5 Mpa ; Consumption: 120L/min at 0.4Mpa
Environment requirements		(20 \pm 2) °C 55% ~ 65%
Dimensions (mm)		1,600 x 800 x 1,660

Function-enhanced options as below , please refer to accessories of video measuring machine.

- **Standard Zoom Lens Option**
- **Precision Zoom Lens Option**
- **Touch Probe Option**



CARMAR TECHNOLOGY CO., LTD.

Bridge Type Video Measuring Machine

VMM-E Series

Bridge type VMM-6060E designs with granite structure and guidance of air bearing that provides rapid movement and accurate position for high traverse. VMM-6060E is the ideal model for larger LCD and PCB inspection. Working with professional CNC software: QIM5008 satisfies various sizes measurements.

Features:

- 1. Support Auto focus function, joystick control and touch probing;**
- 2. Duo closed loop moving control, the motor can position with excellent accuracy;**
- 3. Apply embedded module for servo motor controlling increases the speed of motor responding;**
- 4. High resolution Sony 1/2" color CCD camera and U.S. made NAVITAR zoom lens;**
- 5. With Air bearing design for X and Y-axis and table structure of granite ensures geometric accuracy and vibration resistance.**
- 6. Surface cold-light source is used to enhance the performance of illumination.**
- 7. Applying MS Windows XP with Carmar's CNC measuring software, QIM5008 ensures the best performance for customer.**



VMM-6060E



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VMM-6060E Specifications :

Model	VMM-6060E	
Working table size	640 x 740	
Travel (mm)	X	600
	Y	600
	Z	200
Resolution of X/Y/Z-axis	0.0005 mm (0.5 μ m)	
Positioning Accuracy	0.001 mm (1 μ m)	
Speed	450 mm/s	
Indication Error of X/Y axis	$\leq (3 + L/75) \mu$ m L (measuring length) :mm	
Video System	<ul style="list-style-type: none"> ● CCD Camera : Color 1/2" SONY CCD Camera ● Lighting System : Adjustable LED Surface and Transmission illumination ● Zoom Lens : NAVITAR Zoom Lens ● Magnification of field lens : 0.7X - 4.5X ● Total Magnifications : 34X - 220X 	
Measuring software	QIM-5008	
Weight (kg)	1280	
Power Supply	AC220V/110V 50/60 Hz	
Air Supply	Pressure: 0.4 Mpa \pm 2 ; Consumption: 120L/min at 0.4Mpa	
Environment	(20 \pm 2) $^{\circ}$ C 55% ~ 65%	

Function-enhanced options as below , please refer to accessories of video measuring machine.

- **Standard Zoom Lens Option**
- **Precision Zoom Lens Option**
- **Touch Probe Option**



Accessories for Video Measuring Machine

■ Standard Zoom Lens Option

Accessories	1X tube (Standard)		0.5X tube (Option)		Working Distance (mm)
Zoom Lens	0.7X~4.5X		0.7X~4.5X		
Appending Lens	Total Magnification	Object View (mm)	Total Magnification	Object View (mm)	
0.5X (Option)	15X~95X	20~3.2	7.5X~48X	40~6.4	175
Standard	30X~190X	10~1.6	15X~95X	20~3.2	92
2X (Option)	60X~380X	5~0.8	30X~190X	10~1.6	36

■ Precision Zoom Lens Option

Accessories	1X tube (Option)		2X tube (Option)		Working Distance (mm)
Zoom Lens	Coaxial 0.7X~4.5X (Option)		Coaxial 0.7X~4.5X (Option)		
Objectives Lens	Optical Mag.	Object View (mm)	Optical Mag.	Object View (mm)	
5X (Option)	1.74X~11.43X	4.05 ~ 0.70	3.48X~22.86X	2.30 ~ 0.35	34
10X (Option)	3.48X~22.86X	2.10 ~ 0.35	6.96X~45.72X	1.15 ~ 0.17	33
20X (Option)	6.96X~45.72X	0.91 ~ 0.17	17.40X ~ 114.30X	0.57 ~ 0.09	20
50X (Option)	17.40X ~ 114.30X	0.31 ~ 0.07	34.80X ~ 228.60X	0.23 ~ 0.04	13
150 W Halogen Lamp and Optical Fiber (Option)					

■ Touch Probe Option

Probe Model	RENISHAW MCP Touch Probe		
Sensing Directions	5 way, +/-X, +/-Y, +Z	Uni-directional Repeatability	0.75μm (2σ)
Trigger Force (Fixed)	12g Nominal	Stylus Mounting	M3
Probe Status Display	LED Display	Probe Signal Connector	5 Pin DIN
Over Travel (Z axis)	5mm	Over Travel (X/Y axis)	+/- 20度



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