CNC Video Measuring System iNEXIV VMA-2520

iNEXIV VMA-2520

This entry-level, low-magnification model with a compact, lightweight design offers the functionality and image processing capability of the NEXIV VMR series. The long 200mm Z-axis stroke, 73.5mm working distance and 250mm x 200mm XY stroke enable easy Z-axis measurement of 3D parts with uneven surfaces, including mechanical parts, plastic injection molding parts and medical devices.

Magnification and field of view (mm)

Optical magnification	0.35x	0.6x	1x	1.8x	3.5x
Total magnification	14x	24x	40x	73x	141x
Field of view (mm)	13.3 x 10	7.8 x 5.8	4.7 x 3.5	2.6 x 1.9	1.33 x 1

* Total magnifications listed above represent those on the monitor screen when a 19" TFT monitor is set to the SXGA (1280 x 1024 pixels) mode.

Specifications

Stroke (X x Y x Z)	250 x 200 x 200mm (10" x 8" x 8")
Minimum readout	0.1µm
Maximum workpiece weight	15kg (up to 5kg accuracy guaranteed)
MPE (workpiece weight less than 5kg)	XY MPE_{E1}: 2+8L/1000µm XY MPE_{E2}: 3+8L/1000µm Z MPE_{E1}: 3+L/50µm
Camera	1/3-in. 3CCD color Progressive scan (B/W optional)
Working distance	73.5mm (63mm with optional Laser AF)
Auto focus	Vision AF and optional Laser AF
Illuminator	Diascopic, episcopic, 8-segment LED ring illumination
Power source	100V-240V, 50/60Hz
Power consumption	5A-2.5A (excluding power consumption of host computer and its peripherals)
Dimensions (W x D x H) & weight	
Main body	565 x 690 x 740mm (minimum height), 72kg
Main body, table and controller	650 x 700 x 1360mm, 123kg
Controller	145 x 400 x 390mm, 13kg
Footprint (W x D)	2000 x 1000mm (including table, tower type PC and PC rack)

Touch Probe (TP20 or TP200) available as option before shipment.

Touch probe for height and side measurements expand measuring area (option)

The iNEXIV VMA-2520 accepts the Renishaw® TP20 or TP200 Touch Trigger Probing system, making contact-probing measurements possible. It detects surface and side coordinates for complicated 3D parts, where vision sensing cannot be used. A single part measurement program can incorporate Vision, Laser and Touch Probing to realize multi-sensing metrology in the common datum plane.

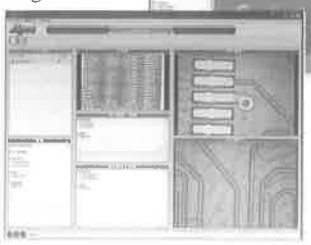
Renishaw® TP20 Touch Trigger Probing system

Application Software for VMA-2520

Imaging documentation program: NEXIV EDF/Stitching Express

This optional software makes EDF—Extended Depth of Field—images by extracting focused pixel information from multiple captured images in Z-axis direction. Also, it generates 2D stitching images from different FOV images captured with CNC XY stage motion, making a wide FOV observation possible. Both functions contribute to image documentation.

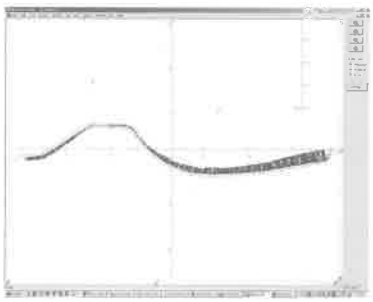
EDF (Extended Depth of Field)



2D image stitching

Two-dimensional profile shape analysis program: iNEXIV VMA Profiler/CAD Reader

iNEXIV VMA Profiler makes it possible to measure and judge 2-dimensional profile shapes in a workpiece that cannot be measured in the normal geometric mode. Now more accurate quantitative measurements can be taken than with the chart comparison method using profile projectors and/or conventional measuring microscopes. With the iNEXIV VMA CAD Reader nominal shape data can be created from CAD data in the DXF/IGES file format.



CAD interface off-line teaching support program: iNEXIV VMA Virtual AutoMeasure

This program enables CAD data to be read into the Virtual Video Window on a separate computer, allowing the operator to use iNEXIV's teaching program with the same operational procedures as on the online computer. This eliminates the necessity of using an actual workpiece during teaching sessions and lets the iNEXIV VMA system concentrate on automatic measurement for increased productivity. The software imports IGES, DXF, DMIS, NC files, Gerber, and so on.