CNC Video Measuring System

NEXIV VMZ-H3030

High-precision Model
# Features

NEXIV model with the highest precision

<table>
<thead>
<tr>
<th>XYZ Stroke</th>
<th>E.UX MPE</th>
<th>E.UY MPE</th>
<th>E.UZ MPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>300×300×150 mm</td>
<td>0.6 + 2L / 1000 μm</td>
<td>0.9 + L / 150 μm</td>
<td></td>
</tr>
</tbody>
</table>

# Zooming heads

5 types of optical zoom systems

<table>
<thead>
<tr>
<th>Zooming head</th>
<th>Optical magnification</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>0.5X – 7.5X</td>
<td>Molds, mechanical parts (household, automobile), PCB, electronic parts, ceramic parts</td>
</tr>
<tr>
<td>Type 2</td>
<td>1X – 15X</td>
<td>Electronic parts</td>
</tr>
<tr>
<td>Type 3</td>
<td>2X – 30X</td>
<td>High density package substrate (line width, height)</td>
</tr>
<tr>
<td>Type 4</td>
<td>4X – 60X</td>
<td>Wafer pattern (WLP, bump height, rewiring mask, MEMS mask)</td>
</tr>
<tr>
<td>Type TZ</td>
<td>1X – 120X</td>
<td></td>
</tr>
</tbody>
</table>

# Software

Easy to use, streamlined software

Provides enhanced ease of use with the customizable GUI and versatility based on Nikon’s years of extensive experience in developing the NEXIV series.

*For Type4 and Type TZ, please refer to Specifications Chart of PG4

## Functions possible with software

- **Virtual (off-line)** — CAD interface off-line teaching support program
- **Profiler** — CAD interface off-line teaching support program
- **MountainsMap X (optional)** — Sample surfaces can be analyzed based on ISO, with the data exported from the NEXIV system.
- **MapMeasure Pro (optional)** — MapMeasure Pro creates wafer maps and is capable of automatically measuring any die on the wafer map. Tray maps can also be created.
Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>VMZ-H3030</th>
</tr>
</thead>
<tbody>
<tr>
<td>XYZ Strokes</td>
<td>300×300×150 mm</td>
</tr>
<tr>
<td>Minimum readout</td>
<td>0.01 µm</td>
</tr>
<tr>
<td>Maximum sample weight</td>
<td>30kg (Accuracy guaranteed: 10kg)</td>
</tr>
<tr>
<td>Maximum permissible error (for samples under 20 kg)</td>
<td>EUX,ME: EUX,ME: 0.6+2L/1000 µm  EUX,ME: 0.9×S/1000 µm  EUX,ME: 0.9+L/150 µm</td>
</tr>
<tr>
<td>Accuracy guaranteed temperature</td>
<td>20 °C ± 0.5 K</td>
</tr>
<tr>
<td>Maximum driving speed XY, Z</td>
<td>100 mm/s, 50 mm/s</td>
</tr>
<tr>
<td>Minimum driving speed XY, Z</td>
<td>0.01 mm/s, 0.001 mm/s</td>
</tr>
<tr>
<td>Camera</td>
<td>VGA 1/3&quot; B/W, Color, XGA 1/3&quot; B/W, Color. *Color camera option is available only with Type 1, 2 and 3.</td>
</tr>
<tr>
<td>Working distance</td>
<td>Type 1, 2, 3: 50 mm (10 mm when using 75 degree LED illumination) / Type 4: 30 mm</td>
</tr>
<tr>
<td>Magnification and FOV</td>
<td>Type 1: 0.5<del>7.5×/9.33×7.01</del>0.622×0.467 mm  Type 2: 1<del>15×/4.67×3.5</del>0.311×0.233 mm  Type 3: 2<del>30×/2.33×1.75</del>0.155×0.117 mm  Type 4: 4<del>60×/ 1.165×0.875</del>0.076×0.058 mm  Type TZ: 1<del>120×/4.67×3.5</del>0.039×0.029 mm</td>
</tr>
<tr>
<td>Autofocus</td>
<td>TTL Laser AF/Image AF</td>
</tr>
<tr>
<td>Illumination</td>
<td>Type 1, 2, 3, and 4: Episcopic, diascopic, and 8-segment ring with 3 angles *All white LED/Type 4 has only 1 angle  Type TZ: Episcopic, diascopic, darkfield</td>
</tr>
<tr>
<td>Power source</td>
<td>AC 100 - 240 V ± 10% 50/60 Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>5 A - 2.5 A</td>
</tr>
<tr>
<td>Dimensions &amp; weight</td>
<td>Main body with table (WxDxH): 1000×1125×1750 mm  approx. 500 kg  Controller: 190×450×440 mm  approx. 20 kg</td>
</tr>
<tr>
<td>Footprint (WxD)</td>
<td>3030×2800 mm</td>
</tr>
</tbody>
</table>

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. September 2018 ©2018 NIKON CORPORATION

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Industrial Metrology Business Unit

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