Coordinate Measuring Machine that has accomplished internal evolution to further demonstrate its overwhelmingly high actual accuracy and active scanning technology.

**Highest-in-class guaranteed accuracy**
Maximum Permissible Indication Error (MPEi) 1.6 + 3L/1000 μm

**Greatly improved probing stability**
Maximum Permissible Probing Error (MPEp) 1.6 μm

**Active Scanning Probe**
Incorporates VAST XT gold

**Incorporates stylus auto change function as a standard feature**

**Light weight with optimized A.V.D* mechanism and FRP cover**
*Anti Vibration Drive

**Rotary probe PH10T/M provided as an option**
Some workpieces cannot be measured without the active scanning technology

The active scanning system is highly appreciated with many application track records, such as measurement of high-precision workpieces that require coaxiality, concentricity, flatness or straightness, evaluation of free-form surface of precision dies, high-precision measurement of deep holes that require long stylus, circumference measurement of tapered parts that requires scanning measurement, evaluation of V grooves, ball screw grooves and rack grooves and high-precision geometrical evaluation.

Incorporates active scanning probe VAST XT gold as a standard feature

The active scanning probe enables high-accuracy measurement of areas that were previously difficult to measure, because it can be fitted with a long and heavy stylus. Also, as the measuring pressure is controllable, probe deflection can be accurately eliminated. These features make it the only one probe system capable of quick and accurate measurement of not only known forms but also unknown forms.

Outstanding actual accuracy comparable to high-end machine

Guarantees maximum permissible indication error (MPEE) to be \( 1.6 + \frac{3L}{1000} \ \mu m \) with the actual value as small as ±1 \( \mu m \)

\( * \) It is the accuracy of the size of the 9/10/6 below.

Active Scanning Technology

- **Active Scanning System**
  - VAST Technology: Active
  - With measuring force control
  - Magnetic force generates uniform small measuring force, which is applied in the workpiece normal direction. Because of this, stylus deflection is minimized and uniform, and accuracy is improved.

- **Passive Scanning System**
  - Conventional system: Passive
  - Without measuring force control
  - Since a mechanical spring is used, measuring force is uneven, stylus deflection fluctuates, and accuracy cannot be improved.
Is the scanning active or passive?
Specifications

Model: XYZAX FUSION NEX

<table>
<thead>
<tr>
<th>Measuring range</th>
<th>X-axis (mm)</th>
<th>Y-axis (mm)</th>
<th>Z-axis (mm)</th>
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<tr>
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<td>650</td>
<td>500</td>
<td>450</td>
</tr>
<tr>
<td>9/6/6</td>
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<tr>
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<tr>
<td>12/25/10</td>
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</table>

Minimum display value (μm): 0.01 (0.1 when using TP200)

Measuring accuracy with VAST XT gold

- Max. permissible indication error MPEI (μm)
  - L is the distance between any two points (mm)
  - MPEI = 1.6 + 3L/1000 (Temperature condition A)
  - MPEI = 2.1 + 3L/1000 (Temperature condition C)
  - MPEI = 2.6 + 5L/1000 (Temperature condition A)

- Max. permissible probing error MPEP (μm)
  - MPEP = 1.6 (Temperature condition A)
  - MPEP = 2.1 (Temperature condition C)
  - MPEP = 2.1 (Temperature condition A)

- Max. permissible scanning error MPETHP (μm)
  - MPETHP = 2.1 (Note 1)
  - MPETHP = 5.3 (Note 2)

Material: Gabbro

<table>
<thead>
<tr>
<th>Table</th>
<th>Width (X) (mm)</th>
<th>Depth (Y) (mm)</th>
<th>Height from floor (mm)</th>
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<tr>
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<td>1370</td>
<td>2410</td>
<td>3510</td>
</tr>
</tbody>
</table>

Workpiece

- Max. height (mm) 620, 770, 970, 1170
- Max. weight (kg) 400, 800, 1000

Driving speed

- Variable speed range (mm/sec)
  - CNC measurement mode: 0.01 to 425 (stepless variable)
  - Joystick mode: 0 to 120 (stepless variable)

Guide system of each axis

- Air bearing

Air supply

- Supply pressure/working pressure (MPa): 0.49 to 0.69
- Air consumption (NL/min): 40, 60, 85

Power supply

- Voltage (V/%): 220 ±10 (grounding required), 1500 VA

Ambient temperature (°C)

- Common condition
- Temperature change (°C/hour): 1.0
- Temperature change (°C/day): 2.0
- Temperature gradient (°C/m): 1.0

Model: XYZAX FUSION NEX

<table>
<thead>
<tr>
<th>Outer diameter (mm)</th>
<th>Depth</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
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<td>2933</td>
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<tr>
<td>1965</td>
<td>1820</td>
<td>3333</td>
</tr>
</tbody>
</table>

Machine height at transport (mm)

- 2050
- 2200
- 2400

Weight (kg)

- 1450
- 2350
- 3200
- 3400
- 3700
- 4500

Note 1: The accuracy is when a stylus diameter of Tip Φ 3 mm is used. Length 32 mm is used.

Note 2: The accuracy is when a stylus diameter of Tip Φ 3 mm, Length 32 mm and a thermofit extension length of 300 mm are used.

* Be sure to check the height of passageways, and, in particular, the height of doors and other openings to be used when the machine is delivered. The height of openings needs to be the machine height at transport plus about 200 mm to allow for the dollies used to move the machines.

* Controller and computer rack are also included.

- Models that can be modified to lower the stand or shorten the Z-axis stroke to reduce the installation height are also available. Contact us for details.

External View and Dimensions FUSION NEX