FLIP CHIP BONDER

High Productivity
- 15,000 UPH (Based on Dry Run)

Mass Defect Protection Capability
- Flux, Die Tilt, Ejector Pin Missing, Contamination

Precision Bonding Capability
- ±5μm @ 3σ

Thin Die / Small Die Capability
- Min. 50μm Thickness / Min. 0.5mm x 0.5mm

HANMI Semiconductor
FLIP CHIP BONDER
A110 Ultra

Enhanced Machine Features

- **High Productivity**
  - 15,000 UPH (Based on Dry Run)
  - Dual Bonding Head
  - Hanmi Special Sequence Profile
  - Enhanced Temperature Control System

- **Precision Bonding Capability**
  - ± 5μm @ 3σ
  - Supreme Vision Inspection System
  - High Accurate Gantry Structure
  - Lower Vibration Control System
  - One Casting Body Structure

- **Mass Defect Protection Capability**
  - Hanmi Special Flux Vision Inspection System
  - Auto Flatness Check System
  - Wafer Map Shift Prevent Function
  - Foreign Material Detect Inspection System
  - Ejector Pin Missing Inspection System
  - Chip Out Detect Inspection System
  - Multi Reject Mark Reading Capacity

- **User Friendly & Easy Operation**
  - Windows Based HMI Screen
  - Easy & Quick Conversion
  - Easy Maintenance

“New Technology”
Flux Vision Inspection

Components and Substrates

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafer</td>
<td>Die Size</td>
<td>0.5mm ~ 30mm</td>
</tr>
<tr>
<td></td>
<td>Die Thickness</td>
<td>0.05mm ~ 3mm</td>
</tr>
<tr>
<td></td>
<td>Wafer Size</td>
<td>up to 12&quot; wafer &amp; 15&quot; frame</td>
</tr>
<tr>
<td>Substrate</td>
<td>Width</td>
<td>28mm ~ 203mm</td>
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<tr>
<td></td>
<td>Length</td>
<td>50mm ~ 300mm</td>
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</table>

Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
<th>MTBR</th>
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</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>16,000 (Based on Dry Run)</td>
<td>2 hours</td>
</tr>
<tr>
<td>Accuracy X-Y</td>
<td>± 5μm @ 3σ</td>
<td>168 hours</td>
</tr>
<tr>
<td>Accuracy Y</td>
<td>± 0.05 μm @ 3σ</td>
<td>168 hours</td>
</tr>
<tr>
<td>Binding Bonding</td>
<td>1N ~ 20N (Programmable from 1N)</td>
<td>3 minutes</td>
</tr>
<tr>
<td>Footprint</td>
<td>1,600mm x 1,200mm x 1,600mm</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Weight</td>
<td>2,600 kg</td>
<td></td>
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