Support for the grinding of hard and brittle materials

The DFG8330 is equipped with a highly durable and high power spindle for large diameter grinding wheels for the fully automatic processing of high-load hard and brittle workpieces.

4-axis, 5-chuck table configuration

The 4-axis, 5-chuck table, and 1 turntable configuration offers solutions for a variety of applications.

By selecting the optimal wheel for each of the 4 axes, this unit offers for low-damage, high-quality or high-productivity processing for a wide range of applications.

Grinding of wafers with supporting substrates

The DFG8830 supports the grinding of workpieces with ø5 - 8-inch glass or ceramic support substrates up to a total thickness of 3.5 mm.

Small footprint

Optimal arrangement of the spindles and handling systems has resulted in a compact footprint of 3.5 ㎡, despite boasting an all-in-one, 4-axis, 5-chuck table configuration.

User friendly operation

The intuitive icon-based GUI touch panel allows simple operation and on-screen step-by-step visualization of the processing stages.

Also, with support for up to four cassettes, the cassette replacement frequency and equipment operation workload can be reduced.
DFG8830 Operation flow
[1] The robot pick removes the wafer from the cassette and places it on the positioning table, where centering takes place.
[2] The transfer arm places the wafer on the chuck table.
[7] The transfer arm removes the wafer from the chuck table and places it on the spinner.
[8] Cleaning and drying
[9] The robot pick returns the workpiece to the cassette.

Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafer Diameter</td>
<td>φ 4” – φ 6”</td>
</tr>
<tr>
<td>Substrate Diameter</td>
<td>φ 5” – φ 8”</td>
</tr>
<tr>
<td>Grinding Method</td>
<td>In-feed grinding with wafer rotation</td>
</tr>
<tr>
<td>Grinding Wheels</td>
<td>mm</td>
</tr>
<tr>
<td>Spindle Rated Output</td>
<td>kW</td>
</tr>
<tr>
<td>Rated torque range</td>
<td>min⁻¹</td>
</tr>
<tr>
<td>Grinding Accuracy</td>
<td>μm</td>
</tr>
<tr>
<td>Thickness variation within one wafer</td>
<td>3 or less</td>
</tr>
<tr>
<td>Thickness variation between wafers</td>
<td>±3 or less</td>
</tr>
<tr>
<td>Machine dimensions(W×D×H)</td>
<td>mm</td>
</tr>
<tr>
<td>Machine weight</td>
<td>kg</td>
</tr>
</tbody>
</table>

Environmental conditions:
- Use clean, oil free air at a dew point of -15 °C or less. (Use a residual oil: 0.1 ppm, Filtration rating: 0.01 μm/99.5 % or more).
- Keep room temperature fluctuations within ±1 °C of the set value. (Set value should be between 20 - 25 °C).
- Keep grinding water and cleaning water temperature + 0 - 2 °C above room temperature (fluctuations within ±1 °C over one hour).
- Keep spindle cooling water temperature between 20 - 25 °C (fluctuations within ±2 °C over an hour).
- The machines should be used in an environment, free from external vibration. Do not install machine near a ventilation opening, heat generation equipment or oil mist generating parts.
- This machine uses water.
- In case of water leakage, please install the machine on the floor with sufficient waterproofing and drainage treatments.
- All the pressures are described using gauge pressures.
- The above specifications may change due to technical modifications. Please confirm when placing your order.
- For further information please contact your local sales representatives.

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