Fully Automatic In-Feed Surface Grinder

DFG8340

Supports small volume grinding with high precision

Realizes stable high-precision wafer processing

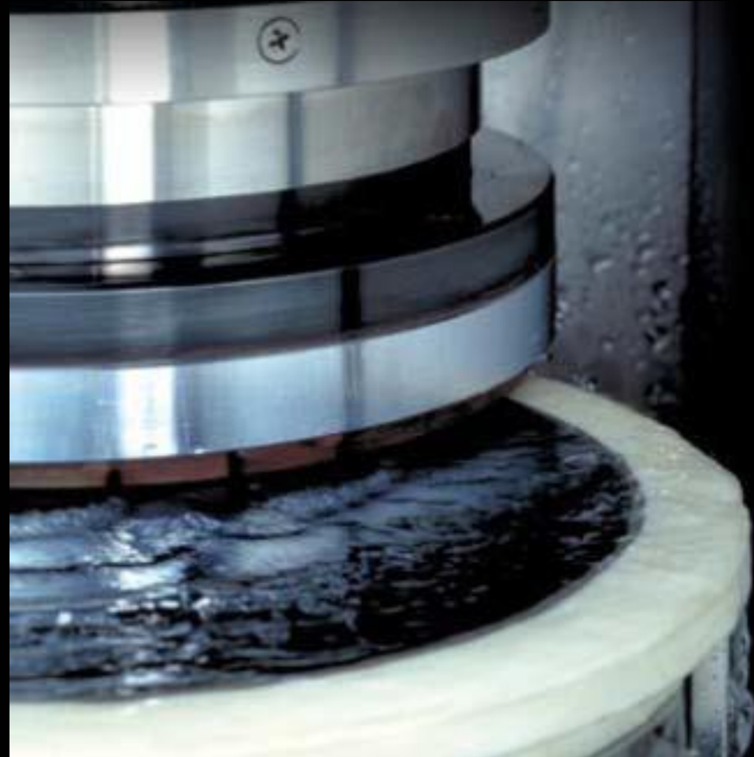
With the integration of devices, wafer manufacturing processing, which requires high-planarity, is adopting surface grinding.
DFG8340, the successor of DFG830 (equipment used all across the world), is equipped with a high-rigidity spindle, realizing stable and high planarization of wafers by minimizing the impact of the processing heat.

Available for various workpieces less than 8-inches in size

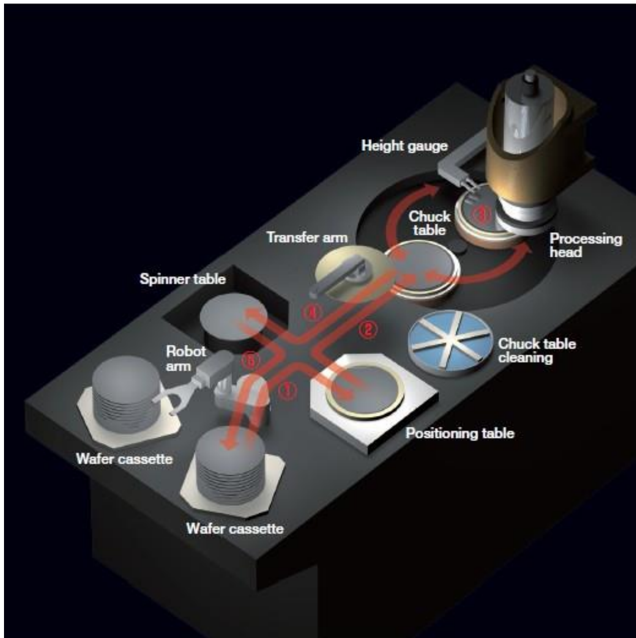
DFG8340 is a simple and compact fully automatic grinder which adopts a single spindle, dual chuck table, and single turn table structure. It can process silicon wafers less than 8-inches with low-damage low-amount processing, and SiC, sapphire, and ceramics.

A grinder that replaces lapping

General lapping is a batch process that uses loose grain, making it difficult to control the finish thickness. DFG8340 improves processing quality and the environmental load by measuring wafer thickness in real time and processing with only DI water.



DFG8340

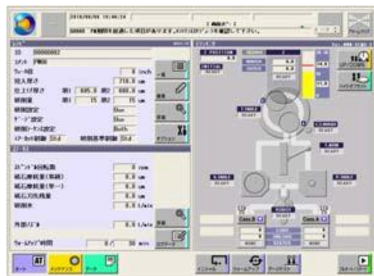


■ Work Flow System

[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. [3] Grinding. [4] The transfer arm removes the wafer from the chuck table and places it on the spinner. [5] Cleaning and drying. [6] The robot pick returns the workpiece to the cassette.

Easy Operation

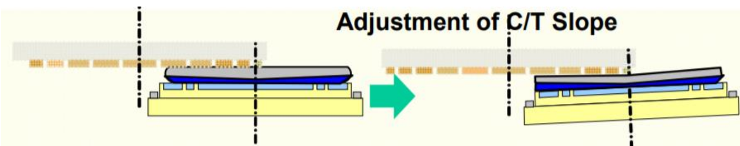
The DFG8340 utilizes an LCD touch screen graphical user interface, making operation and maintenance intuitive and easy.



Operation panel

Simplified Wafer Shape Adjustment

By adjusting the wafer shape from the operation panel in one touch based on the workpiece, DFG8340 achieves high-precision for a variety of workpieces.



Specifications

Specification		Unit	
Wafer Diameter		mm	φ 4"/5"/6"/8"
Grinding Method		-	In-feed grinding with wafer Rotation
Grinding Wheels		mm	φ 200 diamond wheel
Spindle	Output	kW	4.2
	Revolution speed range	min^{-1}	1,000 - 7,000
Grinding Accuracy	Thickness variation within one wafer	μm	Less than 1.5
	Thickness variation between wafers	μm	Less than ±1.5
	Finished surface roughness	μm	Ry less than 0.13 (#2000 fine grinding)
Machine dimensions(W×D×H)		mm	800 × 2,450 × 1,800
Machine weight		kg	Approx.2,500

Environmental conditions

•Use clean, oil-free air at a dew point of -15ºC or less. (Use a residual oil: 0.1 ppm. Filtration rating: 0.01 μm/99.5% or more).

•Keep room temperature fluctuations within ±1ºC of the set value. (Set value should be between 20 - 25 ºC).

•Keep grinding water and cleaning water + 0 - 2ºC above room temperature (fluctuations within 1ºC over one hour).

•Keep spindle cooling water temperature between 20 - 25ºC (fluctuations within 2ºC over an hour).

•The equipment should be used in an environment free from external vibration. Do not install the equipment near a ventilation opening, equipment that generates heat, or parts that generate oil mist.

•This equipment uses water. In case of water leakage, please install the equipment on the floor with sufficient waterproofing and drainage. Note: • All the pressures are described using gauge pressure.

• The above specifications may change due to technical modifications. Please confirm when placing your order.

• For more information, please contact your local sales representatives.