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Model GDM300

No. of Grind Spindle	: 2
No. of Grind Vacuum chuck	: 3
No. of Polish Stations	: 2
Spindle Motor	: 5.5 Kw
Grinding Mode	: Gauge/Laser
Work Spindle Motor	: 1.0 Kw
Wafer Size to Grind + Polish	: 8" to 12"
Bearing type	: Air Bearing

Full-Automatic Wafer Grinder and Dual Polish In-Line system for wafer thinning in Production. 25 um capability. Integrated Edge grinder optional. Laser thickness detection optional. Available to dock directly to Detaper/Mounter unit.

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Precision Back Grinder & Polisher
Model GDM300

FEATURES

Model GDM300 grinder is a fully automatic continuous downfeed grinding machine with dual polishing stations for increased throughput. Wafers are handled through the machine by a 6-axis robot, and load/unload arms designed for 25 um capability. An optional edge trimming system is recommended for eliminating edge chipping for thin wafers. Chuck speed, grinding wheel, and grind spindle downfeed rate speeds can be used to manipulate grinder throughput, surface finish, and wheel life. A two-point in-process gauge measuring system controls wafer thickness under grind spindles 1 and 2 with an optional laser detection for a more precision thickness accuracy (recommended for < 50 um). Programmable oscillating polish heads can be programmed to maintain wafer profile (ttv) in conjunction with with the optional motorized spindle angle adjustment. After completion at grind and polish, wafer is automatically transferred by robot to the mounter unit for UV exposure, detape, and mount. Pre-cut DAF feature is optional while single DAF is included. Coin-stack feature may be integrated. The local polishing unit removes subsurface damage for increased wafer die strength and the ability to handle final thickness of 25 microns.

SPECIFICATIONS

Maximum wafer-machining diameter of wafer	12"
Grinding Spindle: Bearing type Motor Rapid feed speed Grind feed speed	Air bearing, maximum 3000 rpm 5.5 Kw, 4P, high frequency motor 240 mm/min 1 to 999 µm/min
Grinding wheel size	Ø300 mm
Index Table: Number of work spindles Work spindle Bearing type Speed of Work Spindles	3 Air Bearing 1 to 300 rpm
Automatic Sizing Device: Wafer thickness measuring system Wafer minimum setting size resolution Wafer size display range	2 point contact in-process gauge, Laser Detection (Opt.) 0.1 µm 0 to 1.6 mm; extended range software available
Table Cleaning Device (Grinder Side)	DI Water + Ceramic Block
Wafer Cleaning Unit (Grinder Side)	DI Water + Brush
Edge Trimming Device (Optional): Max Spindle Speed Accuracy	Recommended for < 50 um. 1800 rpm +/- 5 µm
Number of Cassettes	2 cassette stations
Polish Station: Work Spindle Polish head Oscillation speed Head Load Pad size	2 High Precision Ball Bearing Work Spindles on Index Table 3 Kw AC servo motor for 10 – 320 rpm 100 – 9,000 mm/min. 0 – 0.5 Kg/cm2 240mm for 300mm, 160mm for 200mm
Polish Table Speed Vacuum Chuck Material	3 Kw AC servo motor for 550 rpm max Alumina ceramics + porous ceramics
Integrated Mounter System: Robot Vacuum Chuck Handling pads UV Irradiating Single DAF/Pre-Cut DAF Coin-Stack	6-Axis Mitsubishi Robot Porous Carbon Fiber Vacuum Chucks Carbon Fiber Handling Pads Standard UV Irradiation system Single DAF included/Pre-Cut DAF Optional Coin-Stack Included

Specifications subject to change without notice