

Okamoto VG-502MKII8 System

The **Okamoto VG-502MKII8 System** is a fully-automatic, continuous in-feed grinding machine, designed to grind semiconductor raw materials such as silicon, carbide, ceramics, glass and other brittle materials quickly and with high accuracy. High RPM capability for vacuum chuck speed and grinding wheel speed delivers improved grinding conditions, resulting in high quality surface finish.



Features

- Automated high-throughput, two stage grinding
- Angular control of grinding spindles for consistent uniformity and customized substrate profile
- Capability for grinding 4" to 8" wafers, including custom shapes
- Four wafer chucks on carousel allow for maximum throughput - with minimum wafer handling.
- Thickness control monitoring provides real time process control
- Simple maintenance and exceptional reliability

Customer Support

Axus Technology provides the installation, warranty, and service support that users depend on for their production and research equipment. Staffed by the most experienced technical teams in the industry, Axus delivers a full range of services to help you manage all your process equipment requirements.

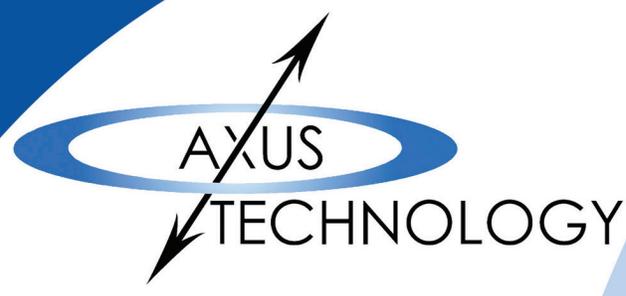
In addition to offering field service, parts, and technical training, Axus Technology's foundry and applications engineers provide process development and engineering services using our fully-equipped applications lab.

We encourage customers to do an on-site inspection of the tool, where they can review the details of the work accomplished, perform a final operational check of the equipment, and participate in the final testing of the tool.

For more information about contract refurbishment services, refurbished tools from Axus Technology, or field service for Okamoto tools, please contact either Tim St. Marie or Barrie VanDevender at our Chandler, AZ facility.

Facilities

- Dimensions: 106"W/62"D/70"H
- Electrical: 3 phase, 200VAC, 60Hz, 20KVA
- Air (CDA): 75 psi, 15.5 gpm
- Water (DI Process): 35 psi, 4-5.2 gpm, 75F
- Water (DI Cleaning): 25 psi, 1-1.6 gpm, 75F
- Exhaust: 18 cfm



Loading Station

A belt is used to carry wafers from the loading cassette to the wafer stopper where a turnover arm places the wafer onto the provisional receiving station. At this station, deionized water removes impurities from the wafer which may cause micro cracks or dimples on the wafers while grinding. Wafers are then conveyed from the provisional receiving station by the swing arm onto the ceramic vacuum chuck on the index table.

Chuck Cleaning

To further prevent micro cracks and dimples caused by contamination, the vacuum surface of the chuck is cleaned by deionized water and four rotating hard polypropylene brushes.

In the case of unprocessed wafers of which the front surface is not protected by tape, four ceramic blocks are used instead of brushes to remove sludge from the chuck.

Two-Stage Grinding Process

The No. 1 spindle station performs the course grinding, stock removal step using a larger mesh abrasive grinding wheel. The No. 2 spindle station provides finish grinding using a finer abrasive material. The vacuum-held wafer on the vacuum chuck is conveyed by the 90° indexing table from the loading station, the No. 1 spindle station, and the No. 2 spindle station without removing the thin wafer to eliminate handling damage.

Automated Thickness Gauge

The automated in-process thickness gauge controls wafer thickness by measuring from the top of the wafer to the top of the chuck. Wafer thickness is measured before, during and after processing by the detector and A/D converter and the measured values are displayed.

Unloading Station

Ground wafers move from the fine grinding station to the unloading station on the index table where deionized water and a soft polypropylene brush are used to clean the machined surface of the wafer.

Spinner

Wafers are conveyed from the unloading station to the spinner using a swing arm. As the spinner rotates a combination of deionized water and dry air are used to clean and dry the wafers.

Loader/Unloader

The system includes two cassettes for loading and unloading. Both loader and unloader provide a signal indicating completion of emptying or filling each set of cassettes. Wafers are placed in the unloader cassettes in the same order as they were in the loader cassettes before grinding.

About Axus Technology

Axus Technology is the industry expert in providing material processing and CMP foundry and wafer grinding services, process tools, and custom configured upgrades that are designed to meet your process and production requirements. We deliver leading-edge CMP, wafer thinning and wafer polishing solutions for semiconductor, MEMS and substrate applications.

Axus Technology sets the standard for creating enabling technologies for field proven production and legacy process equipment.

Customer support services include tool upgrades, spare parts, and field service support for a range of CMP and wafer grinding tools, including installed legacy tools.

Performance Guarantee

Axus Technology is committed to customer satisfaction. While we aggressively pursue the cost and performance goals of our clients, we never compromise on quality or technical performance.

Contact Axus Technology or your local Axus Technology Sales Representative to discuss how Axus can help you get the most from your equipment investment.