

GEOFORM 102



GEOFORM 102 is a bench-top thin sectioning instrument that will cut and grind down to 30 microns or less depending on the hardness of the material because; mineralogical specimens usually contain hard and soft phases.

GEOFORM 102 has two parts: Cutting and Grinding compartments.

- Two machines are combined in the same body:
Cutting and Thin Sectioning.
- Large cutting compartment with movable T-table
- Ability to mount clamping devices
- Colored LCD touch screen with advanced software
- Variable wheel speed, 500-2000 RPM
- Completely closed cutting and grinding compartment with transparent cover and magnetic safety switch
- Ability to fix glass slides with several different dimensions

GEOFORM 102

GEOFORM 102 is specially designed for cutting and thin sectioning of petrographic specimens. It combines both "Cutting" and "Thin Sectioning" machines in the same body.

Cutting Module

GEOFORM 102 has a large cutting compartment like a benchtop cutting machine. There is a T-table inside the cutting chamber, which is movable on Y-axis direction from the front and back. Possibility to mount different type of clamping devices on the T-table for cutting large and irregular shaped rocks, minerals, concrete, glass, ceramics, refractory and other geological samples.

It can accommodate diamond and CBN cut-off discs up to 250 mm diameter. Cutting capacity is up to 90 mm in diameter. Equipped with powerful and precise dual shaft motor to overcome most difficult specimens. Integrated speed regulating unit is available to adjust the cut-off disc speed between 500-2000 rpm.

Various vacuum chucks for different size of glass slides can be mounted on the T-table with the help of a vacuum stand or a movable x-axis vacuum stand. The thin section is fixed on the vacuum holder and re-sectioned up to a thickness of approximately 0.5 mm or any thickness that needs to be obtained.

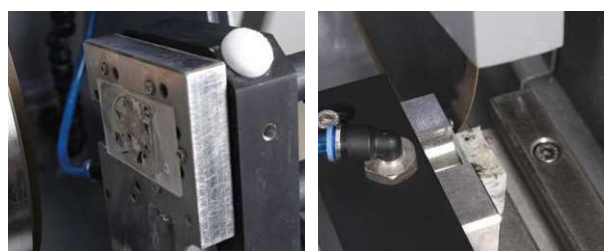
Grinding Module

The grinding module is designed for precision grinding. A universal vacuum holder accepts different sizes of glass slides by changing the location pins. Up to three samples can be grinded at the same time. An optional vacuum pump holds the glass slide fixed on the holder during grinding process. A built-in digital micrometer ensures high precision and the specimen is ground with an accuracy of 2 microns.

Diamond cutting disc and grinding wheels are both on the same spindle which is precisely aligned for high accuracy.

A dual in-line filtering unit removes the moisture from the vacuum line and drains into the cutting chamber when the vacuum pump is turned off. An electronic vacuum control unit allows precise and constant vacuum during grinding.

Both cutting area and grinding area are completely enclosed with an impact resistant transparent cover with magnetic safety switch. Powerful LED illumination inside the cutting and grinding chamber provides excellent observability of the sample.



GEOFORM 102 is a universal product that can be used for precision sectioning, re-sectioning and grinding operations

The soft start and stop function protects your sensitive glass slide and sample from damage during cutting and grinding operation.

Safety

GEOFORM 102 has the highest safety standards. The magnetic safety switch does not allow the motor to be started unless transparent hood is closed. If transparent hood is opened during cutting, the motor immediately stops automatically. Easily accessed and operated emergency stop button ensures immediate shut down. Soft closing feature of transparent hood protects fingers from risk of injury.

Touch Screen Controls



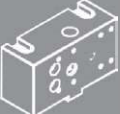

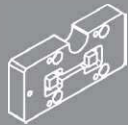

GEOFORM 102 is equipped with 7" HMI touch screen with advanced software that allows extremely simple and professional operation with repeatable results. It increases the productivity, sample consistency and minimize operator intervention.



Variable Wheel Speed

Integrated speed regulating unit allows variable wheel speed, soft start/stop function and smooth operation for maximum precision. Possible to adjust the wheel speed between 500-2000 rpm, which makes it suitable for the wide range of materials.

CLAMPING DEVICES AND VACUUM CHUCKS

Quick Clamping Device  GR 0548	Vertical Clamping Device with clamping shoe  15 05	Fixed Vacuum Stand for Mounting Vacuum Chucks  GR 1868	Movable X-Axis Vacuum Stand for Mounting Vacuum Chucks  GR 1867	Vacuum Chucks for Cutting Glass Slides  1870/1871	Vacuum Chucks for Grinding Glass Slides  1880/1881
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Many petrographic cutting applications require the sectioning of a specimen from an irregular shaped sample. The small size or irregular sample shape can create positioning and clamping difficulties for the operator. To overcome these difficulties, METKON offers a number of special clamping devices for use with GEOFORM 102.

The petrographic sample is stuck on a standard glass slide for thin sectioning operation. There are many different glass slide sizes from small to large. To hold these glass slides safely requires special vacuum chucks. METKON offers a number of special vacuum chucks for many different glass slide sizes.

ACCESSORIES

Vacuum Pump

Vacuum pump is an optional accessory of GEOFORM 102 for holding glass slides on the vacuum chucks. It provides very efficient vacuum generation up to 2000 m altitude from the sea level.

Closed Loop Cooling System

A stainless steel recirculating cooling unit is an optional part of the machine. The specimen surface is cooled by spray nozzles whose water jets hit both the wheel and the specimen. This provides an efficient cooling of the sample and prevents the overheating of the surface structure. It is also possible to connect GEOFORM 102 directly to city water.

