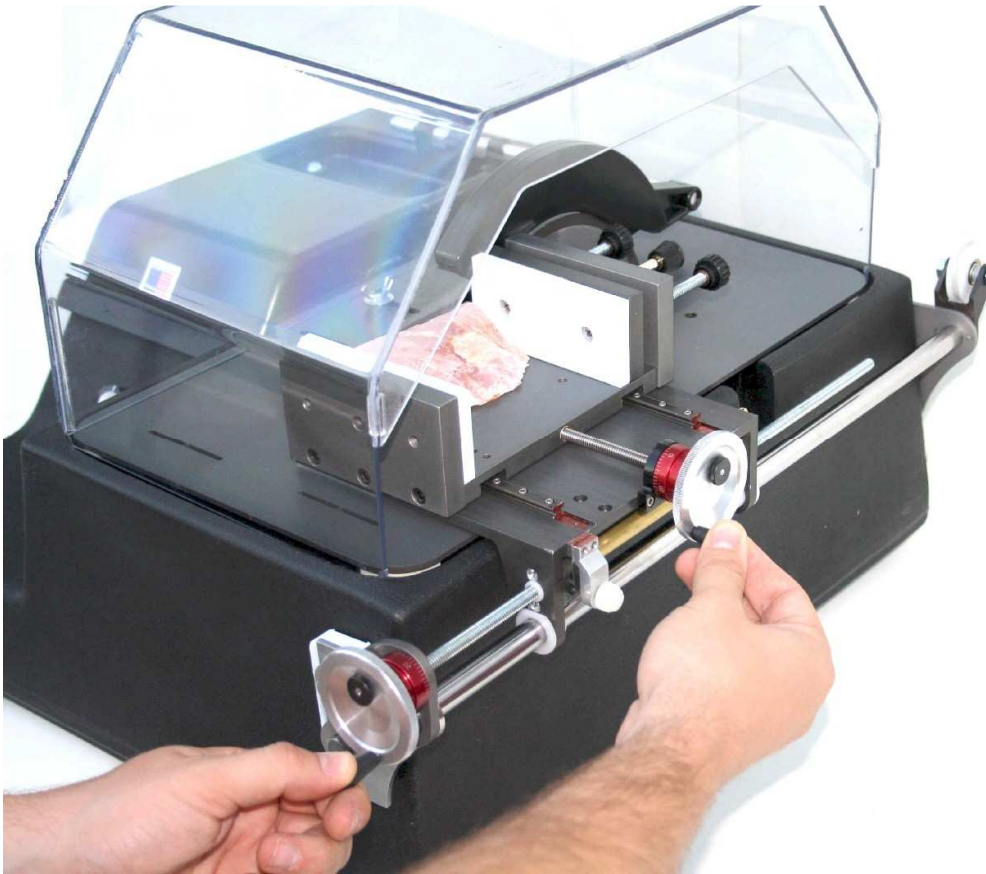


UKAM Industrial Superhard Tools Division of LEL Diamond Tools International, Inc.
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SMART CUT 6001 GP – SECTIONING SAW



- Operator can change the feed rate and blade speed during operation
- Can be used for highest precision applications and for general low deformation, low kerf loss sectioning
- Most comprehensive selection of sample fixturing, flanges and blades.
- Precision material / sample positioning Via hand wheel X & Y lead screw Allowing to control feed rate to .001"
- The clear plastic, splash-proof safety shield encloses the entire cutting area to protect the operator, prevent coolant loss and decrease noise.
- Gravity weight feed system allows user to start and walk away - the saw completes the cut without operator assistance
- User controlled feed rate allows using X and Y axis lead screws handles allow even the most delicate samples to be cut without deformation

PRECISION, VERSITILITY, & CONSISTENCY

NOW AT AN AFFORDABLE PRICE!

For the user who wants all the functionality and unique control of cutting parameters offered by a higher end saw, while working on a tight budget or with limited lab space, SMART CUT GP provides the solution

SMART CUT 6001 GP saw can accommodate material/sample cutting requirements of almost all shapes, sizes and applications. The sample holding table carriage (with vice/sample holder) glides back and forward along X and Y axis lead screws allowing for accurate feed of material in to cutting zone. Material/samples are fed into the cutting zone by several different methods, by use of table attachments. A wide range of material sample holding fixtures/chucks are Available for this machine are easily interchangeable. allowing the SMART CUT 6001 GP saw to accommodate various sample configurations.

Cutting Action: Linear blade feeds into work piece. Material is slowly feed into the rotating blade.

Motor: 1/4 HP

RPM.s (Variable Speed) 400-3,400 rpm

Blades can accommodate:

3" to 7" (75mm-175mm). OD

Blade Thickness: .005. to .075.

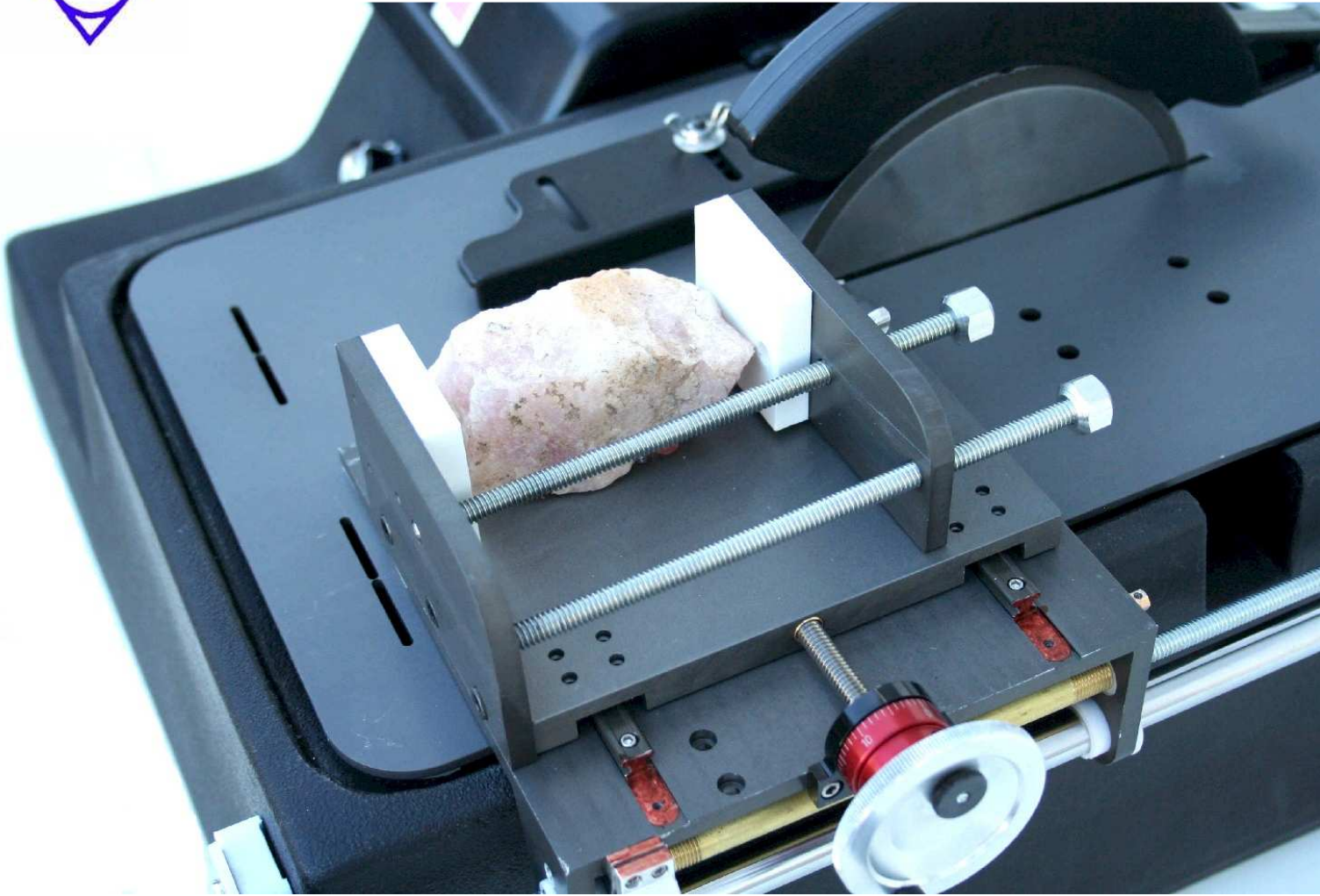
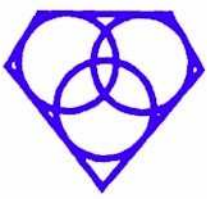
Material Cutting Depth: 2" (50.8mm)

Arbor: 1/2"

Fluid Capacity: 1/4

Dimensions: 18" x 18" x 12"

Shipping Weight: 30 lb



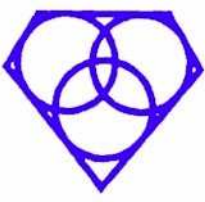
MINIMAL SAMPLE DEFORMATION

The first step in many material preparation methods is the initial sectioning of the sample. During this step, it is important to avoid using methods or techniques that introduce excessive damage to the material being sectioned. The SMART CUT 6001 GP sectioning saw **minimizes the amount of induced sectioning damage** through its design and operation.

Using variable speed from 400 to 3,000 RPM allows the operator to **select the best speed to cut material with minimum deformation**, together with unmatched variety of diamond & CBN wafering blade specifications, The SMART CUT 6001 GP provides surface finish that is free of damage and distortion. This means reduced preparation time in completing subsequent preparation steps.

LARGER MATERIAL DIMENSIONS / SAMPLES CUTTING

One of the advantages of SMART CUT 6001 GP sectioning saw is its **flexibility with regard to sectioning samples larger than possible for most precision cut-off machines**. For greater depth of cut, a 7" (175mm) blade can be used to section materials/samples up to 2" diameter. The large work-table and layout of the machine allows for long cuts to be achieved - perfect for failure analysis, and QA applications such as longitudinal sectioning of components. Sectioned Materials/samples may be an end in themselves, or the starting point for lapping and polishing



EASY TO USE

Providing equal Precision, Productivity and Versatility as High Cost Fully Automatic Diamond Wafering Saws, at affordable price. **Perfect for Production and R & D facilities on a Budget.** Compare to any other low or high speed brand name Sectioning / Wafering Saw. **SMART CUT 6001 GP** is able to withstand more exploitation, requires less maintenance, and much easier to use.

No complex programs or controls to learn or restrict your sectioning operation. Most samples/materials to be sectioned in just few seconds/minutes, with minimum material structure deformation. It's straight forward design allows the operator to concentrate on sectioning samples, not operating the machine.

Gravity Weight Feed - Allows samples/material to be sectioned unattended (without operator presence). Gravity weight feed propels material / sample firmly positioned in vice assembly into rotating blade. Weight can be adjusted depending on material diameter, hardness, & density. Weight / Pressure can be regulated depending on user objectives of preserving true material micro structure or faster sectioning speed.

CUTTING ACCURACY & CONSISTENCY

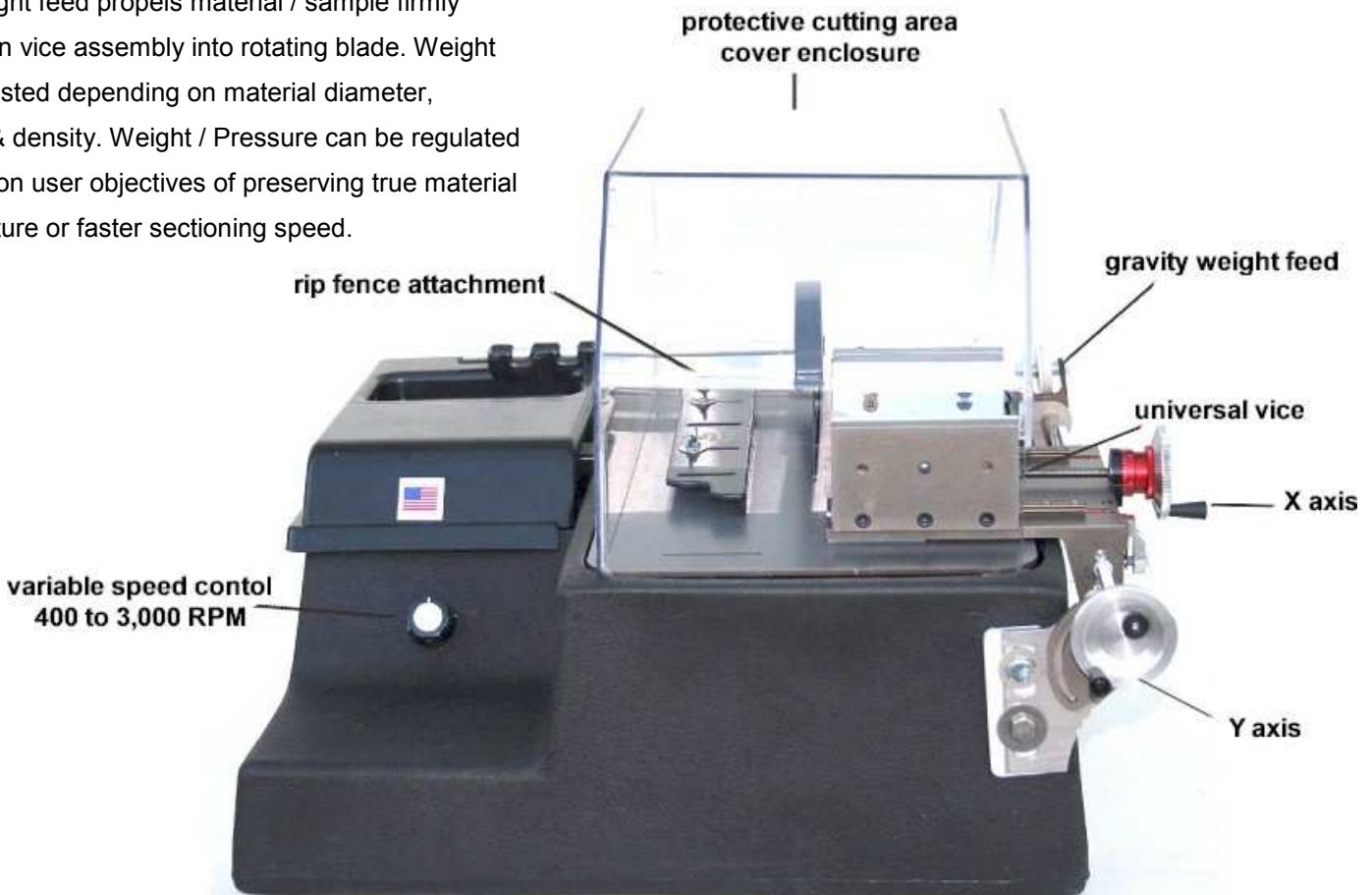
The use of precision lead screws on all sample feed mechanisms mean that cuts can be positioned accurately. This provides reproducibility of performance for cutting materials of widely varying mechanical properties; from the hardest steels and non-metallics down to delicate crystal materials.

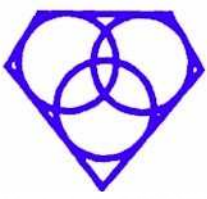
LONG CUTS & DICING

The large work-table and overall layout of the machine, allows for long cuts to be achieved, indexed in the Y direction with the integral motorized table feed.

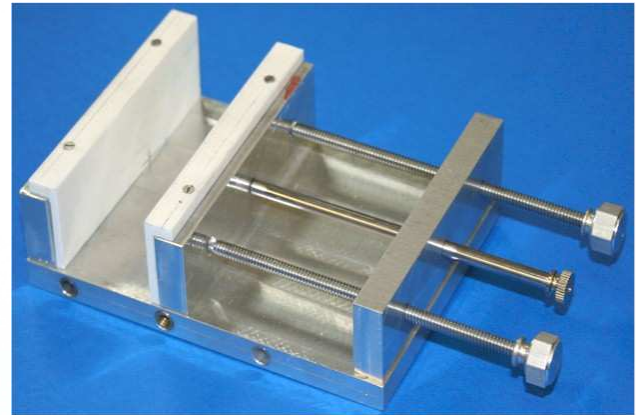
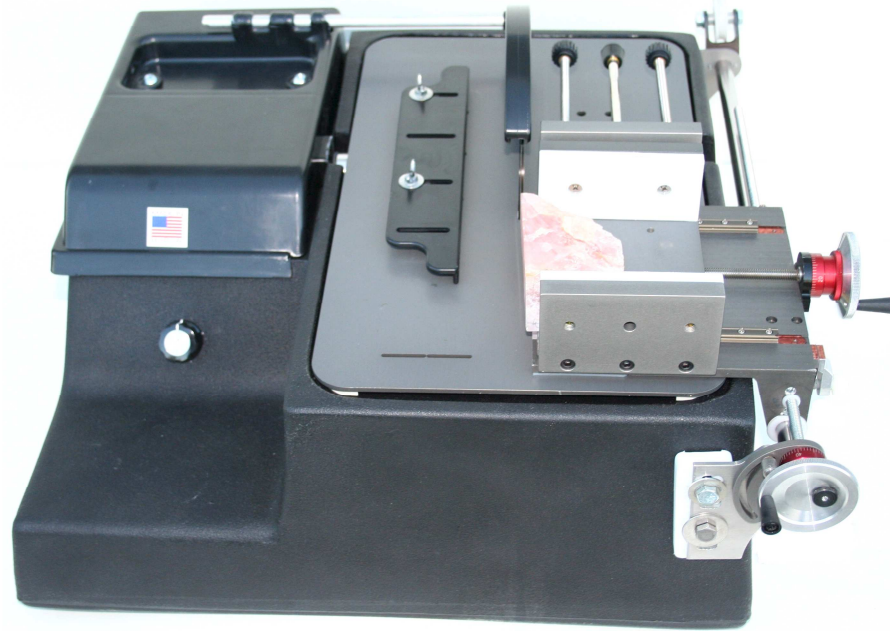
MOST BLADE TYPES

accepts a large variety of diamond and abrasive blades from 3" to 7" O.D. Thickness from .006" to .060".



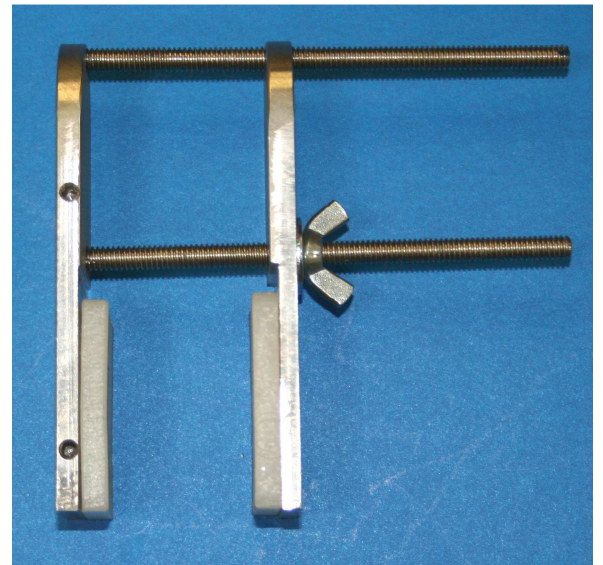


UNIVERSAL VICE



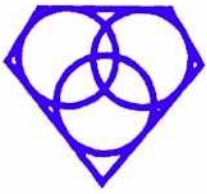
Universal vice can accommodate most material shapes, sizes, dimensions, and geometries

STRETCH VICE



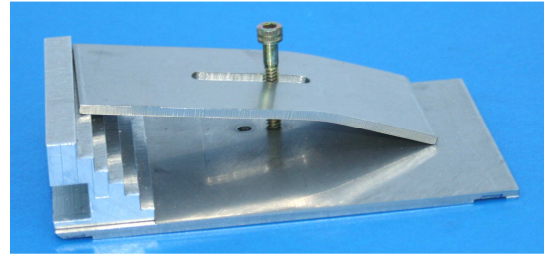
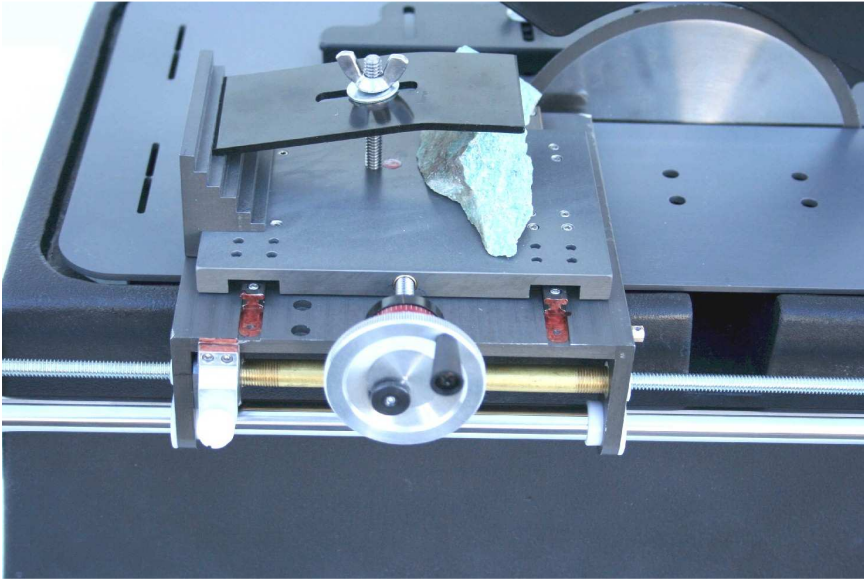
FLANGES
To increase blade stiffness





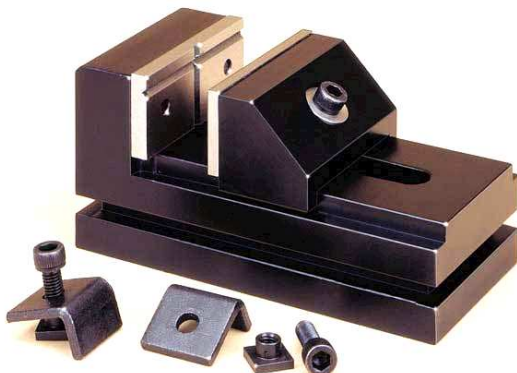
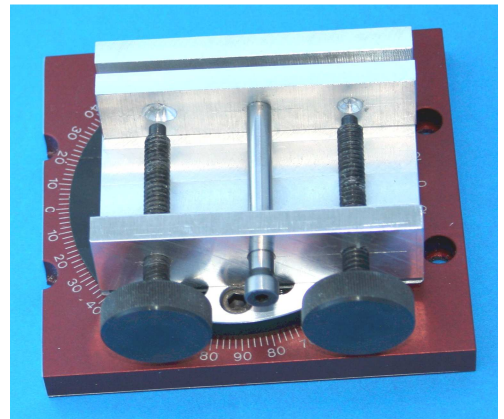
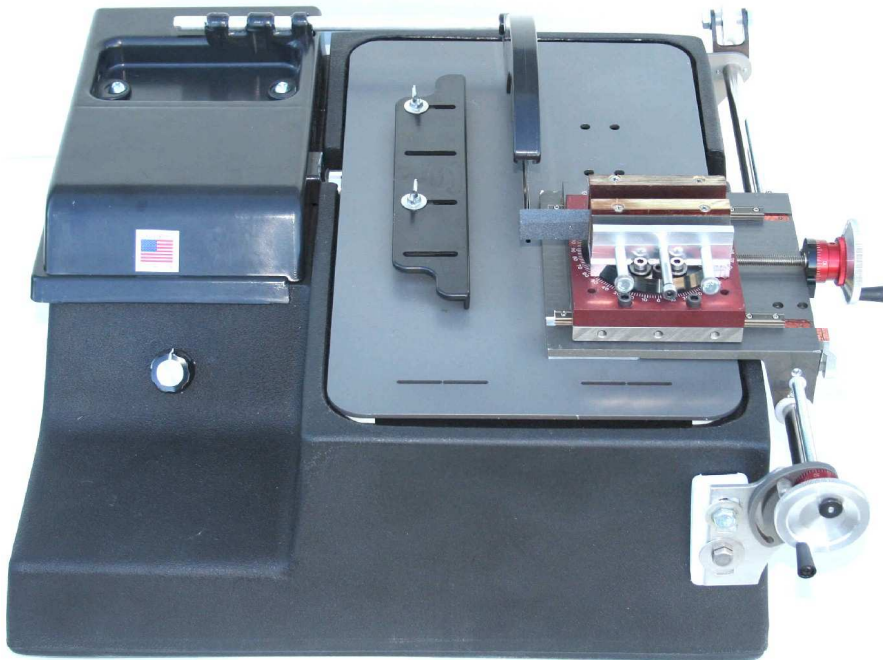
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HORIZONTAL STEPPING VICE



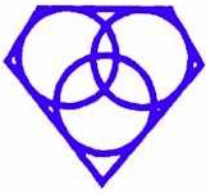
Flat mounting attachment for samples that can be surface mounted -- for example, wafers for dicing or items with a flat base -- samples or workpieces are normally mounted down to the substrate surface with Crystal Wax or similar.

ROTATING VICE

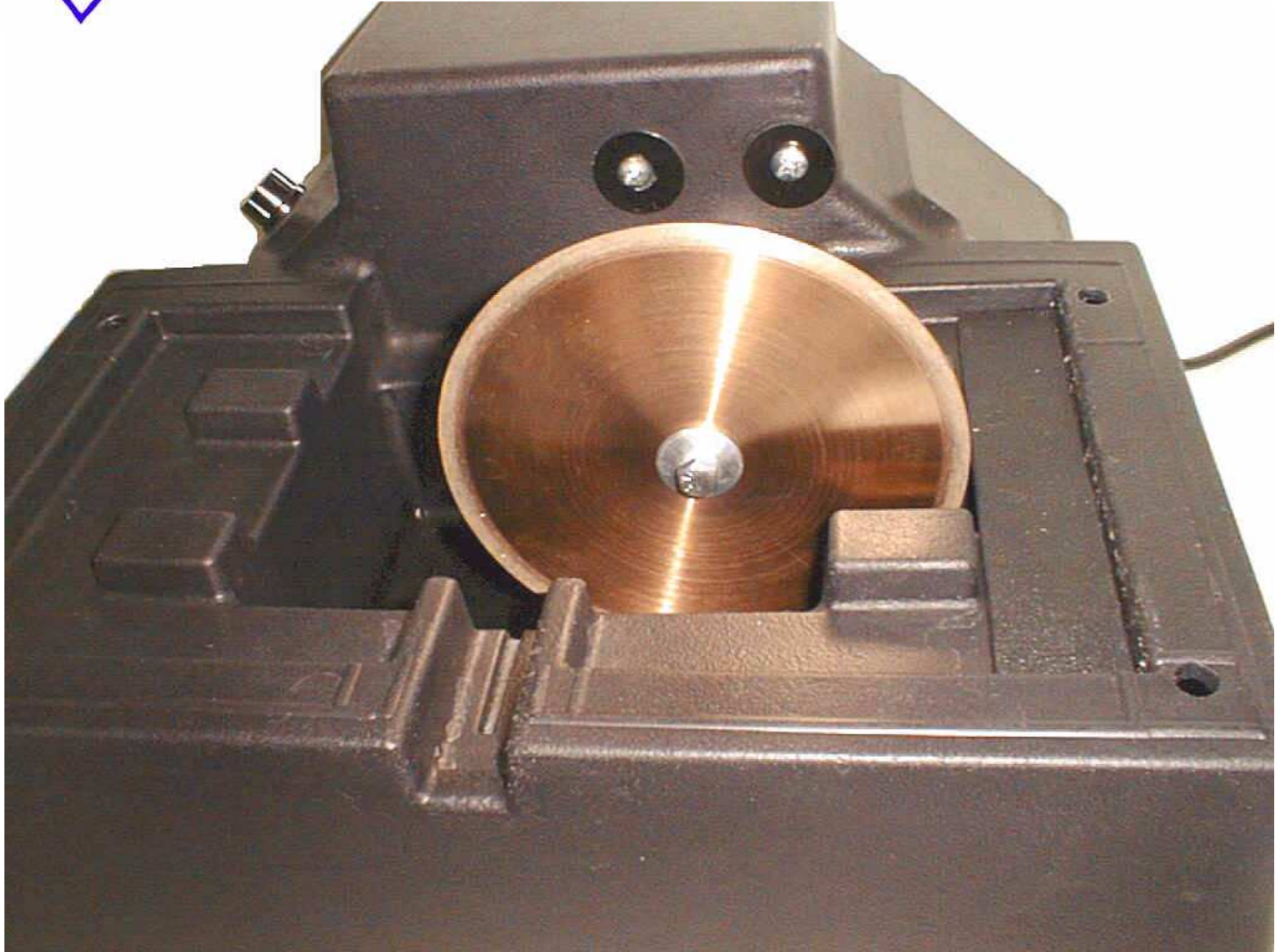


MINATURE VICE

designed to hold the movable jaw down while clamping, eliminating any chance for the jaw to lift. Available with different sample holding inserts. Can accommodate almost any small part geometry and dimensions such as small tubes, rods, and even irregular shape materials.



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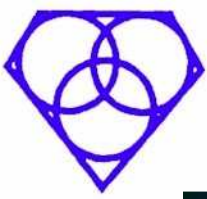


Coolant is stored below and applied to sample by rotating the blade. Saw table has a **large working area** measuring **15" x 9"**. The durable housing is made from unbreakable cross-linked polyethylene which cannot rust. Housing and all plastic parts are guaranteed for life. This unit is equipped with a heavy duty direct drive permanent magnet 1/4 Hp motor with sealed ball bearing.

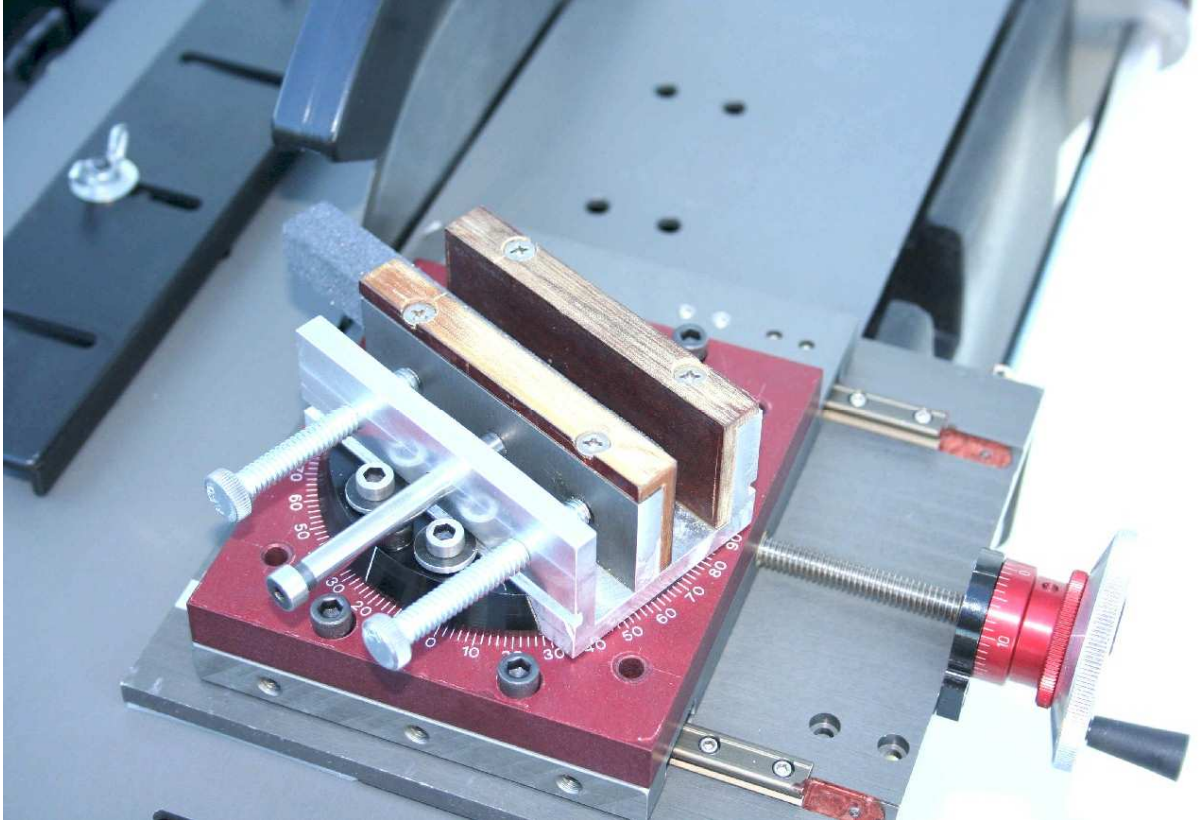
Saw table has a **large working area** measuring **15" x 9"**. The durable housing is made from unbreakable cross-linked polyethylene which cannot rust. Housing and all plastic parts are guaranteed for life. This unit is equipped with a heavy duty direct drive permanent magnet 1/4 Hp motor with sealed ball bearing.

RPM's range from 400 to 3,400. Allowing the user to adjust RPM's to better fit sample/material being cut. Motor is designed to insure that selected speed remains constant at any load. Sectioning is done in closed environment by utilizing Plexiglas Cover. Gravity Weight Feed allows samples to be sectioned unattended (without operator presence).

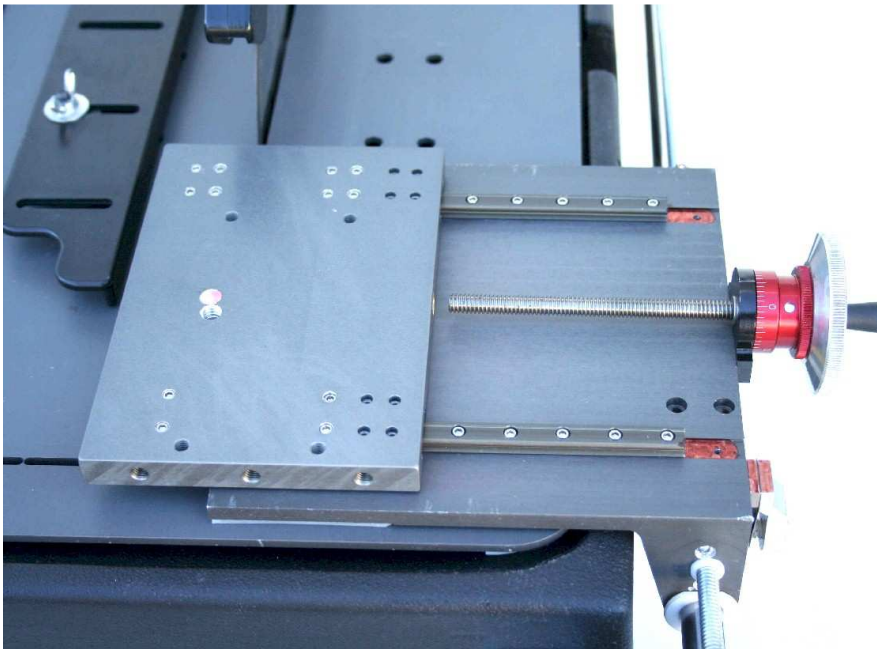
Precision saw combined with longer sample sectioning capability. Can be used for highest precision applications and for general low deformation, low kerf loss sectioning. **SMART CUT™ 6001 GP** has largest work surface area than any other saw in its class. Designed to accommodate oversize samples.



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Rotating vice allows your material/sample to be positioned at any angle 360 degrees



All vices/sample holding fixtures attach to carriage mounting plate with glides and X and Y axis precision lead screws. All sample holding fixtures can be changed within less than 5 minutes.



Coolant re-circulating system

Available as an option