SMART CUT 6001 is a Manual / Semi Automatic Sectioning Saw. Providing Precision, Productivity and Versatility like Fully Automatic Diamond Wafering Saws, at affordable price. Perfect for Manufacturing and R & D facilities on a Budget. This saw is able to withstand more exploitation, requires less maintenance, & much easier to use that Fully Automatic Wafering Saws. Compare to any Brand Name Sectioning / Wafering Saw.

Table shown below may easily be removed, cleaned and adjusted. Blade guard may be adjusted and raised to accommodate larger samples & better fit any particular diamond wafering or abrasive cut off blade. Coolant is stored below and applied to material / sample by rotating the blade. It's straight forward design allows the operator to concentrate on sectioning samples, not operating the machine.

Most Widely Used & Affordable Diamond Sectioning Saw on the market today

SMART CUT™ 6001 is designed for Fast & Precision sectioning of PCB Boards, ceramic substrates, electronic packages, Copper Lead Frames, Silicon Wafers, Optical Glass, Ferrite Chunks, and many other materials. 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. RPM's range from 400 to 3,400. Allowing for most samples/materials to be sectioned in just few seconds/minutes, with minimum material structure deformation. Made in U.S.A.
### SPECIFICATIONS:

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

**Motor Power:** 1/4 HP

**RPM's (Variable Speed)**
400-3,000 RPM

**Blades SMART CUT 6001** can accommodate:

**Wafering Blade Diameters:**
- 4” to 6” (100mm to 150mm)

**Abrasive Blade Diameters:**
- 4” to 6” (100mm to 150mm)

**Blade Thickness:** .006” to .075”

**Can be used with:**
- SMART CUT Diamond Wafering Blades
- Other manufacturers
- Diamond Wafering Blades
- Abrasive Cut Off blades.

**Coolant Capacity:** ¼

**Arbor:** ½” (12.7mm)

**Slot for blade:** 0.124” (3.15mm)

**Arbor Size Diameter:** 1.0”

**Dimensions:** 18” x 18” x 12”

**Shipping Weight:** 22 lb

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### ADVANTAGES:

- **Variable Speed:** from 400 to 3,400 RPM. Allows operator to easily change speeds during operation. Even most delicate samples can be sectioned without deformation
- **Removable Cutting Table** for easy coolant & blade changes
- **Adjustable blade guard** accepts 4”, 5”, and 6” Blades
- **Largest Working Surface area** of saw in its class. 15” x 9” for sectioning oversize samples.
- **More Powerful 1/4 Hp motor.** Designed for cutting ultra hard to soft specimens / materials
- **Unbreakable cross-linked polyethylene** prevents corrosion
- **Minimal Blade Load**
- **Largest surface work area available**
- **Very Easy to Use & Maintain**
- **Best performance & price per cut**
- **Universal Application / Adjusts to fit almost any application**
- **Perfect for Manufacturing and R & D Organizations on a Budget**

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### WAFFERING BLADES:

- **Sintered (Metal Bond), CBN, HYBRIND BOND (between metal & resin bond)**
  - 4” x .012” x ½” ID
  - 5” x .014” x ½” ID
  - 5” x .020” x ½” ID
  - 5” x .025” x ½” ID
  - 6” x .014” x ½” ID
  - 6” x .020” x ½” ID
  - 6” x .032” x ½” ID

- **Electroplated (nickel bond)**
  - Continuous & Interrupted Coating
  - 5” x .010” x ½” or 5/8” ID
  - 5” x .016” x ½” or 5/8” ID
  - 5” x .024” x ½” or 5/8” ID
  - 6” x .009” x ½” or 5/8” ID
  - 6” x .016” x ½” or 5/8” ID
  - 6” x .024” x ½” or 5/8” ID
  - 6” x .032” x ½” or 5/8” ID
  - 6” x .045” x ½” or 5/8” ID

*All wafering blades are available from stock in different diamond concentrations, grit sizes, and bond harnesses to fit your specific application. Blades can be used with plain water, water soluble coolant, or oil. Other thickness are available upon request.*

We will help you select the Right Diamond Wafering Blade for your application.
TYPICAL APPLICATIONS:

Ferrous & Non-Ferrous Metals:
- Plain Carbon Steels Electronic Packages
- Stainless Steels Plastics
- Tool Steels Fasteners
- Aluminum Refractories
- Copper Base Alloys Integrated Circuits
- Magnesium Thermal Spray Coatings
- Titanium Metal Matrix Composites
- Biomedical Wafers
- PCB's Ceramics
- Petrographic

Precision Longitudinal Cuts and Slot Cutting on Long Samples:
- Implants Bones
- Tubing Aircraft Fasteners
- Turbine Blades
- Cutting and Notching Ceramic and Plastic
- Specimens

INDUSTRIES USED IN:
- Advanced Ceramics
- Composites
- Glass
- Quartz
- Medical Devices
- Metallography
- Photonics / Optics
- Semiconductor
- Many Others

BENEFITS:
+ Improve cutting speeds
+ Minimize material structure damage
+ Improve surface finish quality
+ Reduce material loss
+ Obtain more accurate tolerances

= SUPERIOR RESULTS

ACCESSORIES:
- Vice Assembly
- Plexiglass Cover
- Gravity Feed
- Rip Fence Attachment
- Dressing Sticks of all sizes and configurations
- Replacement Wafering Blades

SMART CUT coolant or mineral oils available in:
- Quart
- Gallon
- 5 Gallon
- 55 Gallon Drums
SMART CUT 6001 Vise Assembly is an adjustable guide that allows for accurate precision cuts. Wing nuts are tightened to clamp the work piece securely in place. The carriage advances slowly to feed material evenly into the blade. Easily installed by bolting into place. Samples can be accurately positioned in vice.

Vise can be easily adjusted to accommodate a large variety of material sizes, thickness, shapes, and configurations. SMART CUT 6001 vises to hold longer samples for applications such as slot cutting and cutting samples on angle.

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. As well as users objectives for sectioning speed in correlation quality of cut, and surface finish.

**SMART CUT™ Synthetic Water Soluble Coolant**

Stream of SMART CUT™ coolant added to deionized (DI) water reduces material thermal stress, edge damage, & internal cracking, assuring long-term integrity of material being cut. Since SMART CUT™ KOOL is a coolant and lubricant, both the diamond blade and material benefit.

- Improve Sectioning Speed and Efficiency
- Increase Blade Life
- Improve Material Surface Finish
- Reduce Chipping
- Reduce Material Cracking & Preserve Material Structure

For best results, we recommend using SMART CUT™ Diamond Blades. Contact: UKAM Industrial Superhard Tools for the right diamond wafering blade for your application. The diamond wafering blade itself is the most important part/factor of your sawing operation.

**SMART CUT™ LP Grinder / Polisher**

Perfect companion to SMART CUT™ 6001 Precision Sectioning Saw. Grind & Polish samples sectioned with this sectioning saw fast & easy. **BUY BOTH & SAVE**
UKAM Industrial Superhard Tools is one of the leading manufacturers of high Precision Diamond Wafering Blades in the world. From 0.5” to 72” OD, starting .001” TH and up. With over 50 years of experience in manufacturing, research, and development. Following the belief that there is always room for improvement. We continue to raise standards for the whole industry. In addition to manufacturing diamond wafering / sectioning blades for our own SMART CUT series Precision Diamond Saws. We manufacture many Diamond Wafering Blades used on other well know sectioning / wafering saws.

We recognize that the **Diamond Wafering / Sectioning Blade by itself is perhaps the most important factor in your sectioning / precision diamond sawing operation.** The diamonds impregnated inside the bond matrix of the wafering blade, are what actually participate in cutting action.

No matter how precision or well made your wafering saw. You will not be able to obtain the material surface finish, and precision tolerances you need, if the blade you are using is not right for your application

UKAM Industrial Superhard Tools proprietary blade chemistry, precision manufacturing methods, modern quality control methods, allow us to control and regulate the dozens of variables that affect blade life, quality of cut, surface finish. Reducing and often eliminating additional steps often required after sectioning. All blades are manufactured to fit your specific material, application, and surface finish requirements. We will work with you to determine your needs, and develop the right bond formulation, concentration, and grit sizes.

UKAM Industrial Superhard Tools has one of the **Largest Inventory of Precision Diamond Wafering Blades in the U.S.** With over 4,000 diamond wafering blades in stock, available in different sizes, thickness. arbor sizes. diamond concentrations. diamond mesh sizes. and bond hardness’s.

You are sure to find the **Right Diamond Wafering Blade for your application in stock and ready for same day delivery.** If you are not using these blades, you are paying too much.

**SMART CUT™** precision Diamond Wafering Blades are designed and specially selected to provide the maximum possible blade life for your desired cut quality, and speed.
<table>
<thead>
<tr>
<th>Material</th>
<th>Bond Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic Glass</td>
<td>E</td>
</tr>
<tr>
<td>Agate</td>
<td>M</td>
</tr>
<tr>
<td>Al-Ni-Co</td>
<td>RCBN</td>
</tr>
<tr>
<td>Alumina (fused)</td>
<td>M</td>
</tr>
<tr>
<td>Aramit Fibre Plastics</td>
<td>M</td>
</tr>
<tr>
<td>Barium Titanate</td>
<td>R/H</td>
</tr>
<tr>
<td>Boron Carbide</td>
<td>M</td>
</tr>
<tr>
<td>Brake Lining</td>
<td>E</td>
</tr>
<tr>
<td>Cemented Carbide</td>
<td>M/R</td>
</tr>
</tbody>
</table>

**CERAMICS**

- Oxide ceramics, sintered
- Al2O3 (aluminium oxide)                      | M         |
- Al2O3 (tubes)                                | R/H       |
- Al2O3 (electronic resistors)                 | E/M       |
- Al2O3 (seals)                                | M         |
- Carbide Ceramics                             | R/H       |
- TIC (titanium carbide)                       | M         |

**NITRIDE CERAMICS**

- Si3N4 (HPSN) silicon nitride                 | R/H       |
- Ceramic Tiles                                | M         |
- Ceramics Unfired                             | E         |
- Chrome Nickel (10% Cr, 90% Ni)               | RCBN/HCBN |
- CRP (carbon reinforced plastic)              | M         |
- Epoxy Resin Boards                          | E         |
- Epoxy Copper-Clad with circuits              | E         |
- Eternite (asbestos-free)                     | E/M       |
- Formica (nameplates)                         | E         |
- Germanium (semiconductor)                    | M         |
- GGG (semiconductor)                          | E/R/H     |
- Glass Optical                               | M         |
- Glass Fibres (bundled)                       | E/R       |
- Glass Sheet                                 | M         |
- Glass Ceramics                               | M/R       |
- Glass Hard Laminate (cast epoxy)             | E         |
- Glass Fibre Reinforced                       | E         |
- Glass Laminates (safety/bullet proof glass) | M/H       |
- Glass (quartz glass tubes)                   | R/H       |
- Glass Wool                                   | E         |
- Glass (pyrostop)                             | M/H       |
- Glass (thick optics)                         | M/H       |
- Glass Technical                              | M         |
- Glass Fibre Rod                              | E         |
- Glass Hard Laminate                          | R/H       |
- Granite                                      | M         |
- Graphite                                     | E/M       |
- GRP (window sections)                        | E         |
- GRP (constructional sections)                | M         |

**MAGNETIC MATERIALS**

- Ferrites Sintered                            | M/R       |
- Ferrites Cast                                | MCBN      |
- Rare Earth Magnetic Materials                | R/H       |
- Samarium Cobalt                              | M/R       |
- Malachite                                    | M         |
- Marble                                       | M/E       |
- Melamine Resin                               | E         |
- Metal Coated Ceramics                        | E/M       |
- Moybdenium                                   | RCBN/H    |
- Mycalex (cast stone)                         | M/E       |
- Ni Hard Rods                                 | RCBN      |
- Piezoceramics                                | M         |
- Polycarbonate (glass reinforced)             | E         |
- Polystyrene Sheets                           | E         |
- Printed Circuit Boards                       | E/M       |
- PVC Hard                                     | E/M       |
- Quartz (fusible)                             | M/R       |
- Quartz (synthetic)                           | M         |
- Rhodochrosite                                | M         |
- Rose Quartz                                  | M         |
- Sapphire                                     | M/R/H     |
- Sendust                                      | E         |
- Silicon (polycrystalline)                    | E         |
- Silicon Carbide (pressed & crushed)          | M         |
- Silicon (monocrystalline)                    | M         |
- Silicon (semiconductor)                      | M         |
- Silicon Nitride                              | R/H       |
- Silicon Carbide (ReSiC)                      | R/H       |
- Steatite                                     | M/R/MCBN  |
- Stellite                                     | M         |
- Tiger’s Eye                                  | M         |
- Titanium                                     | M/R/H     |
- Titanium Carbide                             | M         |
- Titanium Zirconate                           | M         |
- Topaz                                        | M         |
- Tungsten                                     | M/R/E     |
- Tungsten Wires                               | M         |
- Uranium Dioxide                              | M         |
- Uranium                                      | M         |
- Zirconium                                    | M         |
HOW TO ORDER

Order by Phone:

Call: (661) 257-2288  Monday through Friday 8:30 a.m. to 5:30 p.m.

Order by Fax:

Fax: (661) 257-3833,  available 24 hours a day.

Order by Mail:

send your orders to: 28231 Avenue Crocker, Unit 80 Valencia, CA 91355 U.S.A.

please include product item number, description, and payment.

Accepted forms of payment

We accept Visa, MasterCard, and American Express. Organizations located in State of California add 8.25% sales tax. Net 30 terms on approved credit. Credit terms are only available to eligible organizations in USA and Canada.

Pre Payment is requested from all customers outside North America. Payment by wire transfer is preferred. If paying by wire transfer, please add $35.00 USD to total. This is how much our bank charges us for each incoming wire transfer.