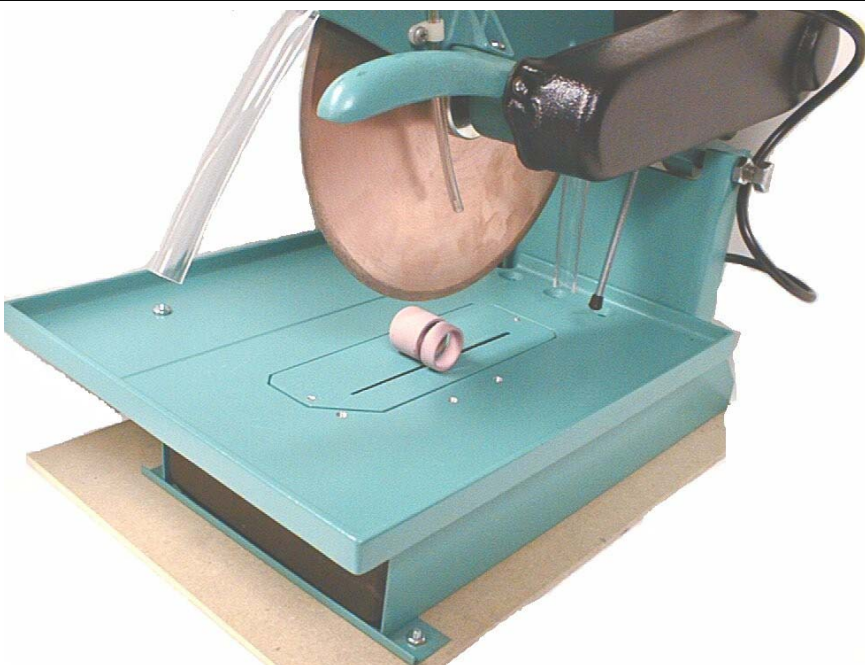




SMART CUT 1004 Diamond Cut off Saw

SMART CUT 1004 Diamond Cut off Saw is a perfect Laboratory or Production Saw for cutting a large variety of round and irregular shape materials / specimens (such as tubing & rods). Specifically designed for use with thinner kef blades and cutting ferrous and nonferrous metals, ceramics, metal matrix composites, thermal spray coating, polymers, coal, glass, cermets, minerals, glass tubing & many other materials. The overhead design puts operator, in the best position to see and **make accurate, precision cuts.** Rigid machine never moves, **each cut is consistently straight and square.** Template design outlined with aluminum or other type marker can be cut accurately right on the line. High torque 1/4hp motor makes cutting fast and smooth. Adjustable pivot hinge eliminates all looseness and play for precision alignment. It's straight forward design allows the operator to concentrate on sectioning samples, not operating the machine. **It's large versatility, and affordable price makes it a must have for any Production or R & D facility. Made in U.S.A.**



Made in USA

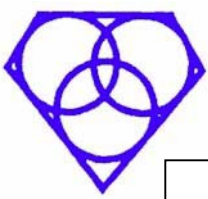
**UNMATCHED IN
 ACCURACY,
 SPEED,
 CLENLINES, &
 ENERGEY
 EFFICENCY**

TECHNICAL INFO

- Operation:**
Manual Cutt Off
(swing arm concept)
- Motor Power:** 1/4
- Blade Size and Speeds:**
10" (254mm) Blades,
3400 rpm (60Hz)
- Blade Types:**
Diamond Cut off
Wheels, Abrasive Cut
off Wheels
- Working Table:**
13" x 12"

PERFECT FOR UNCONVENTIONAL MATERIALS TYPES & SHAPES

Specifically designed for use with a large variety of thinner kef diamond & abrasive cut off blades. SMART CUT 1004 bridges the gap between precision sectioning saws and larger cut off machines. This precision diamond cut off saw will accommodate most materials & samples while reducing set up and cutting time. Large range of Ultra Thin & High Precision diamond cut off blades from .019" Thick & up are available for cutting small parts that would otherwise be consumed by thicker blades.

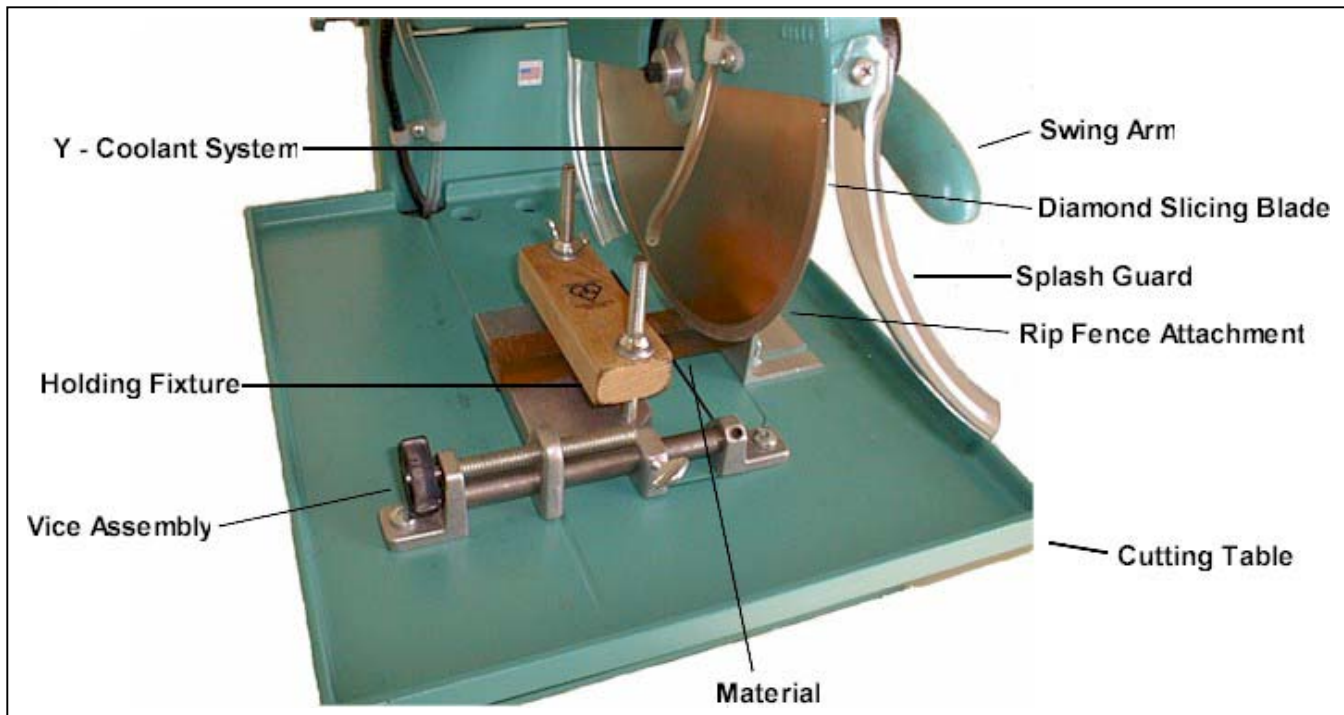


UKAM Industrial Superhard Tools

Division of LEL Diamond Tools International, Inc.

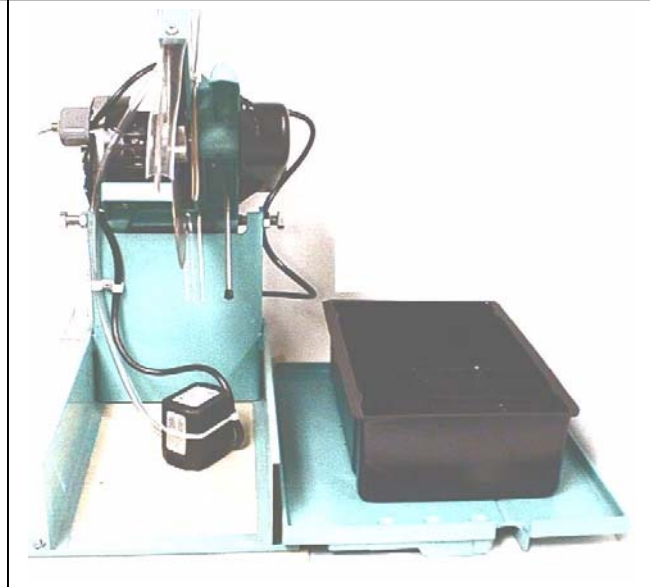
25345 Avenue Stanford, Unit 211 Valencia, CA 91355 USA

Phone: (661) 257-2288 Fax: (661) 257-3833 www.ukam.com



FEATURES:

- Solid Rigid Construction. No twist, stays in alignment
- Large cast aluminum table. Lifts off for easy cleaning
- Sturdy cast aluminum arm, counterbalanced, swings easily
- Rigid frame holds precision alignment, and maintains accuracy
- Submersible pump with "Y" coolant system directs coolant to cutting zone. Flexible plastic tubing carries coolant to cutting zone at both sides of blade.
- Sturdy aluminum casting. Rigid, baked enamel finish for easy cleaning.
- High Precision dual bearing 5/8" arbor. Accepts up to an 8" Precision Diamond Cut off blade. Operating in 3,000 to 3,500 RPM range needed for fast and precision cutting/sectioning of advanced materials.
- Belt Guard for Safety
- Material never moves. SMART CUT 1004 minimizes secondary material preparation steps. Grinding, Lapping, and Polishing of material is almost eliminated and minimized.



INDUSTRIES USED IN:

- **Advanced Ceramics**
- **Composites**
- **Glass**
- **Quartz**
- **Medical Devices**
- **Metallography**
- **Photonics / Optics**
- **Semiconductor**
- **Many Others**



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ADVANTAGES:

- Affordable, heavy duty manual abrasive cut off provides excellent cuts quickly and consistently. Even on hardest materials.
- Minimizes cutting time while maximizing specimen capacity of up to 3.75 (95mm) diameter.
- Compact tabletop design fits most laboratory tables.
- Accepts up to 10" (254mm) diamond cut off or abrasive blades and 2.5 (64mm) flange
- Powerful ¼ HP motor for sectioning various types and sizes of materials & metallographic samples.
- Heavy-duty cast aluminum base provides strong rigidity
- Large 13" x12" work table, to accommodate large & unconventional material types and shapes. Lifts off for cleaning.
- 3 Quart Capacity Coolant Tank. Lifts out, making cleaning fast & easy.
- Recalculates coolant with Submersible Pump included with each saw.
- Smooth-Quiet Polyflex belt drive allows for fast and quiet cutting operation with minimum vibration.
- Large Coolant Capacity / Optional overhead lamp provides strong illumination of cutting zone.
- Splash shield at both front and back part of the saw
- Energy Efficient - uses minimum amount of electricity



SMART CUT 1004 Accessories

Rip Fence Attachment & Lamp Overhead

Rip fence attachment allows the user to maintain accurate and consistent material cutting dimensions. Lamp overhead accessory provides a stream of bright light onto the cutting area.



Submersible Pump



Oil filled, for use with oil or water soluble coolants. Allows coolant to recalculate. Pump is easily lifted out for cleaning.

Vise

Vise / Fence attachment & assembly allows large and irregular shape materials/samples to be positioned and cut fast & accurately with ease.



BENEFITS:

- Minimal Blade Load / Very Simple to Learn how Use & Operate
- Largest surface work area in its class. Allowing large lengths & unconventional material geometries to be sectioned with ease
- Best performance & price per cut
- Can withstand more exploitation than conventional precision sectioning saws
- Universal Application / Adjusts to fit almost any application
- Improve Cutting/Sectioning Speed
- Minimize Material Structure Deformation
- Improve Surface Finish Quality
- Reduce Material Loss
- Perfect for Manufacturing and R & D organizations on a Budget

Sintered (metal bond), CBN & Hybrid Bond (between metal and resin)

8" x .025" x 1/2" or 5/8" ID
8" x .032" x 1/2" or 5/8" ID
10" x .032" x 1/2" or 5/8" ID
10" x .040" x 1/2" or 5/8" ID
10" x .062" x 1/2" or 5/8" ID

Electroplated (nickel bonded) continuous, interrupted coating, or slotted

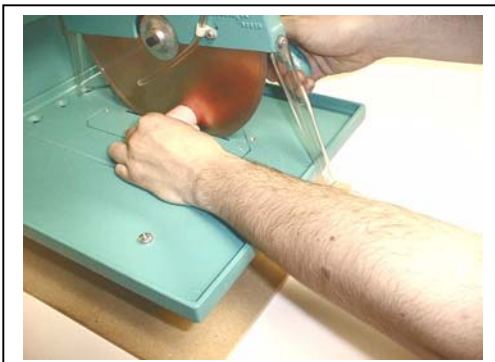
8" x .016" x 1/2" or 5/8" ID
8" x .024" x 1/2" or 5/8" ID
8" x .032" x 1/2" or 5/8" ID
8" x .045" x 1/2" or 5/8" ID
10" x .019" x 1/2" or 5/8" ID
10" x .040" x 1/2" or 5/8" ID
10" x .050" x 1/2" or 5/8" ID
10" x .065" x 1/2" or 5/8" ID
10" x .093" x 1/2" or 5/8" ID
10" x .125" x 1/2" or 5/8" ID

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



Ferrous & Non-Ferrous Metals:

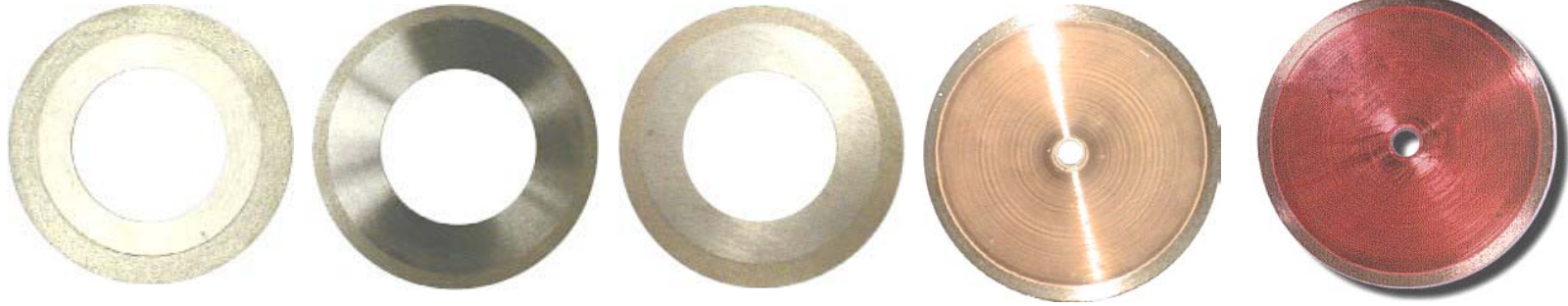
- Plain Carbon Steels Electronic Packages
- Stainless Steels Plastics
- Tool Steels Fasteners
- Aluminum Refractories
- Copper Base Alloys Integrated Circuits
- Magnesium Thermal Spray Coatings
- Titanium Metal Matrix Composites
- Biomedical Wafers
- PCB.s Ceramics
- Petrographic
- MANY OTHERS





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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.



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.

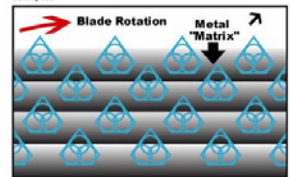
We recognize that the Diamond Wafering / Sectioning Blade by itself is perhaps the most important factor in your sectioning / precision diamond sawing operation. The diamonds impregnated inside the bond matrix of the wafering blade, are what actually participate in cutting action. No matter how precision 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.

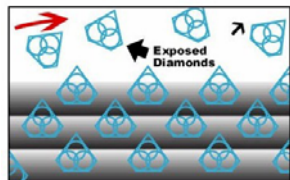
UKAM Industrial Superhard Tools has one of the **Largest Inventory of Precision Diamond Wafering Blades in the U.S.** With over 4,000 diamond wafering blades in stock, available in **different sizes, thickness. arbor sizes. diamond concentrations. diamond mesh sizes. and bond hardness's.**

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.

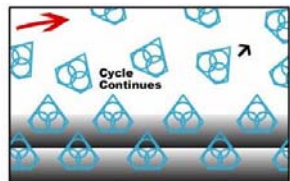
The sharpest and finest quality DeBeers diamonds that go into a Smart Cut Diamond Bond. Immediately penetrate into the material, grinding and polishing as they cut.



Diamonds are activated only at the exposed layer. As diamonds layer begin to wear out, diamonds in a new diamond layer are immediately activated, substituting the already used up diamond layer. The Smart Cut Diamond Bond makes sure every diamond is in the right place and at the right time, working where you need it most.



The newly exposed diamonds don't effect diamonds already working on the material. Unlike many other diamond bonds, diamonds in a Smart Cut remain sharp and grow sharper with each cut. Prolonging product life and consistent performance.



This advanced formulated open diamond bond design insures minimal chipping, fast cut, constant speed of cut, minimal cutting noise, and most important of all minimal loss of precious material.

***SMART CUT™
technology.
Advanced
technology that
redefines the
standard in
cutting.***