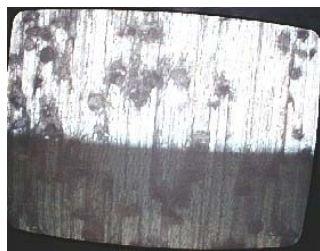




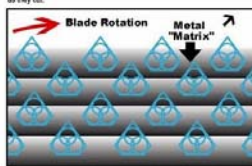
**PRECISION DIAMOND WAFERING BLADES**  
**NEW GENERATION (HYBRID™ BOND) - SMART CUT™**



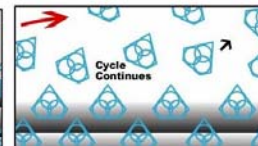
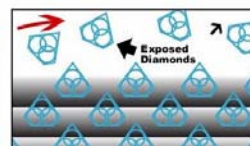
**SMART CUT™** Series Precision (HYBRID Bond) diamond wafering blades are the highest overall performance blades available today. Manufactured utilizing **SMART CUT™** technology, advanced technology that redefines standard in cutting. HYBRID Bond is designed to give you the smooth surface finish you need from a resin bond, and superior long life you expect from a metal bond. One HYBRID Bond Wafering Blade will last 3 to 5 resin bond blades put together. Available in different diamond concentrations, mesh sizes, bond hardnesses, and inside diameters. We will work with you to determine your needs, and recommend the right parameters for your specific material / application.



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.



**How SMART CUT Works?**



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.

**Item No. OD Diameter TH Thickness ID (arbor size)**

23-4668WH	3" (75mm)	.010" (0.28mm)	1/8"
23-4669WH	3" (75mm)	.015" (0.37mm)	1/8"
23-4670WH	4" (101.6mm)	.014" (0.35mm)	.20" (5mm)
23-4671WH	4" (101.6mm)	.020" (0.5mm)	.20" (5mm)
23-4672WH	5" (125mm)	.014" (0.35mm)	.20" (5mm)
23-4673WH	6" (152.4mm)	.014" (0.35mm)	.20" (5mm)
23-4674WH	6" (152.4mm)	.020" (0.5mm)	.276" (7mm)
23-4675WH	6" (152.4mm)	.032" (0.8mm)	.276" (7mm)
23-4678WH	8" (203.2mm)	.025" (0.6mm)	.276" (7mm)
23-4679WH	8" (203.2mm)	.032" (0.8mm)	.276" (7mm)
23-4711WH	10" (254mm)	.032" (0.8mm)	.276" (7mm)
23-4712WH	10" (254mm)	.040" (1.0mm)	.276" (7mm)
23-4716WH	12" (300mm)	.0512" (1.3mm)	.276" (7mm)
23-4717WH	14" (350mm)	.0512" (1.3mm)	.276" (7mm)
23-4718WH	16" (400mm)	.0512" (1.0mm)	.276" (7mm)

**ADVANTAGES:**

- + More Universal
- + More Aggressive
- + Cuts Faster
- + Cuts Smoother
- + Lasts Longer
- + Minimal Chipping
- + More Precision
- + Straight Cut
- + Heat Resistant
- + Easier to Use
- + NO oil required (no contamination)
- + Minimal Dressing
- + SAVE MONEY!!!**

**APPLICATION:**

- + Glass
- + Optical Materials
- + Quartz
- + Glass / Pyrex Tubing
- + Aluminum oxide
- + Silicon Nitride
- + Fused Silica
- + Bk7
- + Silicon Carbide
- + Sapphire
- + Zirconia
- + Boron Carbide
- + Advanced Ceramics
- + Composites
- + Medical Devices
- + Many Others

**SMART CUT™ High Precision Wafering Blades, insure the highest standards for cut quality and accuracy from material is being cut, to reducing secondary steps after sectioning completion.**

**FEATURES:**

- Excellent Performance, even on Materials with a High Metallic Content
- Cut Hard to machine materials 3 times faster
- Last 2.2 times longer
- Works on larger variety of materials (More Universal)
- No Smearing / No Material Deformation
- Priced 4.41 times less expensive than the leading / conventional Brand Name Wafering Blades
- Non Magnetic Alloy Core / No Contamination
- Used with plain water, synthetic coolant, or oil
- Wafering Blades with excellent surface finish are available

All sizes are in stock and ready for same day delivery.

We can make any arbor size (ID) you want.

Other sizes, thickness, & arbor sizes are available upon request. Please check for availability.

**Equipment Used On:**

- Sectioning/Wafering saws
- Abrasive cut-off saws
- Surface Grinders
- And other equipment





# 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

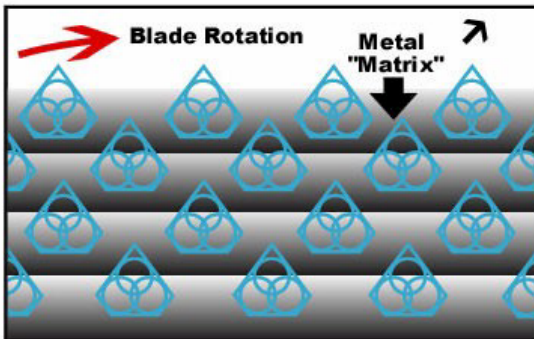
**+ Improve production rates + Reduce Material Deformation + Improve surface finish quality + Reduce material loss + Obtain more accurate tolerances = SUPERIOR RESULTS**

UKAM Industrial Superhard Tools, Division of LEL Diamond Tools International, Inc. has recently introduced a new breakthrough: **SMART CUT™** technology in manufacturing precision diamond blades. This technology allows us to properly position and orient the diamond inside the metal matrix. Making sure every diamond is in the right place and at the right time, working where you need it most. (Please, see diagram ....)

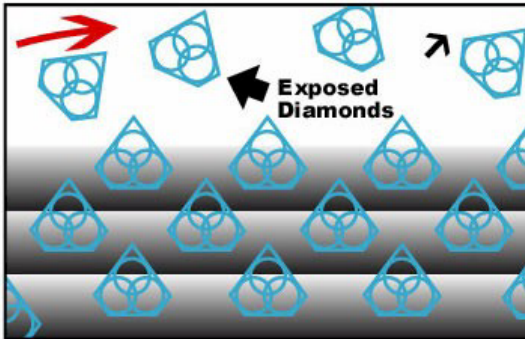
**maximum cutting performance** – each diamond works like a small work horse. Diamonds come in contact with the material in the right place and at the right time, working where you need them most. You get the maximum use out of diamond and bond. Some unique benefits & advantages of **SMART CUT™** technology:

## How Smart Cut Works?

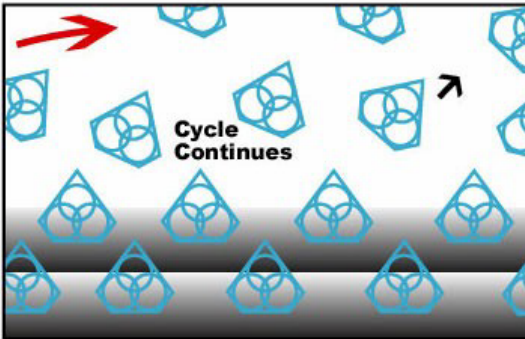
The sharpest and finest quality DeBeers diamonds that go into a Smart Cut Diamond Bond, immediately penetrate into the material, grinding and polishing as they cut.



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.

**no glazing** – requires minimal dressing, the bond renews itself

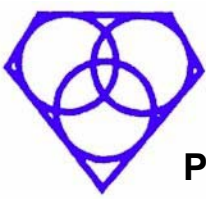
**faster cutting action** - Diamond blades manufactured utilizing this technology are much more aggressive than your conventional blades. They cut faster, still leaving behind a smooth finish.

**more universal & longer lasting** - These diamond blades are designed to work on virtually any material you can find.

You can cut very hard materials, than switch to cutting very soft materials and the blade will maintain the same consistent performance. 7mm diamond depth allows the blade to last **80% to 40% longer** on the hardest materials.

**superior coolant system** - these blades are designed to cut with or without oil. We feel it is more preferable to the user to use water as a coolant. Oil does not a proper coolant for this procedure, as most other manufacturers would suggest. Water is a true organic coolant, witch does not leave the specimen being cut oily or contaminated.

**Better Surface Finish** - HYBRID Bond Diamond Products have been successfully implemented in "mission critical" applications. Depending on the material you are machining, RPM's, coolants, and other factors. HYBRID Bond can help you improve your current chipping and surface finish yields.

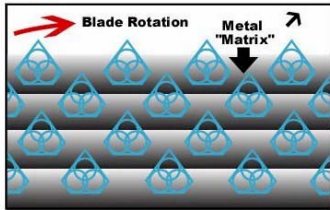


## PRECISION DIAMOND WAFERING BLADES CROSS REFERENCE / TABLE

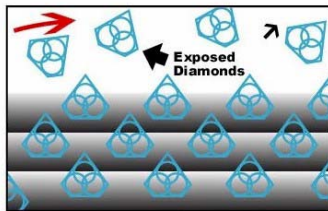
Below is a reference chart of Sintered (Metal Bond) Laboratory Grade Diamond Wafering Blade, for several diamond wafering blade vendors. Use this table to cross reference the Item Number of the Conventional Diamond Wafering Blade you may have been using to the New Generation, sintered (metal bond) Diamond Wafering Blade with *SMART CUT™* technology manufactured by UKAM Industrial Superhard Tools. All *SMART CUT™* Diamond Wafering Blades are available in many different grit sizes, diamond concentrations, bond formulations, & arbor sizes. With over 4,000 wafering blades in stock, you

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.

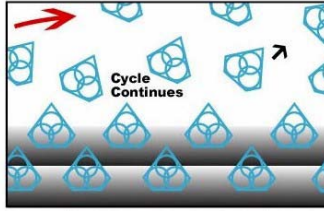
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**2.2 more life from each blade**

BLADE SPECIFICATIONS	BUEHLER / PRICE IN USD	STRUERS / PRICE IN USD	LECO / PRICE IN USD	UKAM / PRICE IN USD
3" x .006" x 1/2"	11-4243			23-4667W 23-4667WH 23-4667PA available in different diamond concentrations & mesh sizes
	11-4253			
	11-4283			
	11-4298			
	11-4263			
4" x .012" x 1/2"	11-4244	0CON-210	801-137	23-4670W 23-4670WH 23-4670PA available in different diamond concentrations & mesh sizes
	11-4254			
	11-4264			
	11-4234			
5" x .015" x 1/2"	11-4245		802-439	23-4672W 23-4672WH 23-4672PA available in different diamond concentrations & mesh sizes
	11-4255			
	11-4285			
	11-4295			
	11-4265			
5" x .020" x 1/2"	11-4235			
	11-4215			23-4673W 23-4673WH
11-4225				
6" x .020" x 1/2"	11-4246	0CON-321 0CON-330		23-4674W 23-4674WH 23-4674PA available in different diamond concentrations & mesh sizes
	11-4276			
	11-4266			
	11-4236			
7" x .025" x 1/2"	11-4237			23-4677W 23-4677WH 23-4677PA available in different diamond concentrations & mesh sizes
	11-4247			
	11-4227			
	11-4277			
	11-4267			
8" x .035" x 1/2"	11-4242	0CON-206		23-4679W 23-4679WH 23-4679PA available in different diamond concentrations & mesh sizes
	11-4238			
	11-4248			
	11-4228			
	11-4279			
	11-4288			
11-4268				



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## HOW TO ORDER



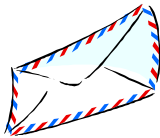
### Order by Phone:

Call: (661) 257-2288 Monday through Friday 8:00 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: 25345 Avenue Stanford, Unit 211 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. California Residents add 8.25% sales tax.

**Guarantee:** The quality of our products are 100% guaranteed.



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## **International Orders**

Mail, fax, or e-mail orders to UKAM Industrial Superhard Tools. A confirmation of receipt will be forwarded to buyer immediately. If a confirmation of receipt is not received, buyer should resubmit the purchase order to UKAM Industrial Superhard Tools in order to insure processing of the order. UKAM Industrial Superhard Tools will calculate and fax or e-mail the subtotal of the merchandise and comparison shipping charges when the order is prepared to be shipped. Buyer should then choose the preferred means of shipping, add shipping costs to the subtotal of estimate and notify UKAM Industrial Superhard Tools by phone, fax, or e-mail, regarding preferred shipping and chosen method of payment.

## **Whatever your goal or objective**

**UKAM Industrial can help you get there faster.**

### **Largest Inventory & Selection**

with over 2,000 different types & specifications of precision diamond products available from inventory. You are sure to find what you are looking for in stock and ready for same day delivery.

- Over 4,000 Precision Diamond Blades in stock
- Over 1,000 Diamond Drills & Drilling Accessories in stock
- Hundreds of Diamond Dicing Blades in stock

If we don't have it in stock. Chances are no body will. Call: ( 6 6 1 ) 2 5 7 - 2 2 8 8

### **Manufacturers Direct Prices**

SMART CUT precision diamond products offer the best value & performance. In most cases UKAM Industrial Superhard Tools can meet and beat a competitors price on products of same quality & performance. If you are not using one of our products, chances are you are paying to much.

### **Research and Development**



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UKAM Industrial Superhard Tools has over 50 years of experience in manufacturing, research, and development of new and advanced technologies to keep up with your increasing challenges.

### **Technical Support**

We are committed to helping you improve and optimize your cutting and drilling operation to the outmost level of efficiency. If you have a special application, that requires a custom solution. Send us a piece of your material, and we will analyze it in our laboratory and design a bond formulation for your particular requirement.

You can rely on us and our group of authorized application engineers to assist you in your cutting requirements, answer any questions, and provide you with the personal attention you deserve. Please, feel free to contact our Technical Support Team at Phone: (661) 257-2288 from Monday to Friday 8:00 to 6:00 p.m. PST.

### **Incredible Value**

UKAM Industrial Superhard Tools offers you real value and savings. Our Precision Diamond Products manufactured utilizing **SMART CUT** technology will

- save you money
- save you time
- save you material
- improve overall performance

Try a precision Diamond Product with SMART CUT technology TODAY!!!

### **Custom Manufacturing**

Can't find what you are looking for? Let us know. We can manufacture it for you or redesign our products to better fit your needs, standards, specifications, and requests.

### **New Generation & Technology**

UKAM Industrial Superhard Tools is a LEADER in developing new products. We are constantly engaged in Research & Development to better meet your needs and expectations. And continue to raise standards for the whole industry. With UKAM you can rest assured you're getting the latest, cutting edge products you deserve.