

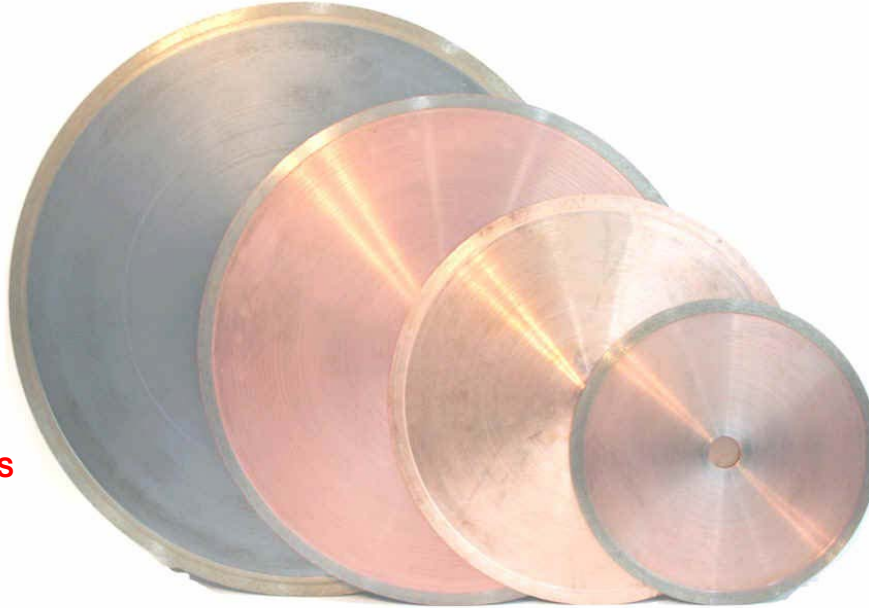
UKAM Industrial Superhard Tools Division of LEL Diamond Tools International, Inc.
 28231 Avenue Crocker, Unit 80 Valencia, CA 91355 USA
 Phone: (661) 257-2288 Fax: (661) 257-3833 www.ukam.com

Diamond Lapidary Blades - **SMART CUT™** technology

NEW GENERATION & TECHNOLOGY SINTERED (METAL BOND) BLADES

Why waste Valuable Time, Money, & Material?

- More Precision
- Minimal Dressing
- More Universal
- Heat Resistant
- Easier to Use
- Save Material
- **NO OIL** required
water cooled.
- **REAL TIME & MATERIAL SAVERS**
- **BEST VALUE & PERFORMANCE**



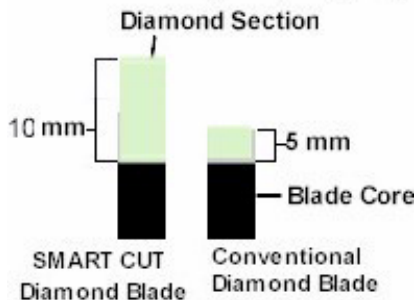
- Chip Free Cutting
- Cuts Faster
- Lasts Longer
- More Aggressive
- Smoother Finish
- Straight Cut
- Superior Quality
- Superior Consistency
- **REDUCE TIME SPENT ON SECONDARY STEPS (such polishing & grinding)**

*Don't struggle with inferior blades - **DEMAND THE BEST !!!***

Best performance & price per cut. Blades last **80% to 40%** longer than conventional sintered blades available. **Thinner blades allow less loss of material.**

SMART CUT™ series precision sintered (metal bonded) diamond lapidary blades. These blades provide unmatched performance for cutting Precious & Semi Precious Stones. Designed for Professionals & Users who understand and appreciate quality. Manufactured utilizing **SMART CUT™** technology, these blades will give you the **BEST PERFORMANCE & VALUE FOR YOUR MONEY**. Giving you consistent results you can count on everyday. **They will last longer & cut faster than ordinary notched, plated, and other sintered (metal bond) lapidary blades**

Diamond Depth (Height)



SMART CUT Diamond Blades have

100%
MORE Diamond

Diamond Height for 4" to 10" blades is 7mm (.276") - **40% more than any other blade**.
 Diamond Height for 12" to 16" is 10mm (.394") - **100% more diamond (2 times more life)** than any other blade. **DIAMOND THICKNESS (TH)** specified is ACTUAL THICKNESS of diamond section, not core thickness. **SMART CUT™** series lapidary blades perform on applications where normal lapidary blades leave behind. **The time & material you will save is worth the price of these blades alone. Designed for Lapidary Application Only. For other applications, consult us on correct blade to use.**

http://www.ukam.com/lapidary_blades.html

The Diamond Blade by itself is perhaps the most important factor in your lapidary cutting operation.



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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, and consistent performance. Discover why some of the Leading **Fortune 500** companies, **Industry, Military, Jewelry manufacturers**, to **Professional Lapidary Hobbyists** around the world prefer **SMART CUT™** blades. **THINNEST & LONGEST LASTING sintered (metal bond) Diamond Lapidary Blades** Available Today.



Saws Used On:

- Trim Saws
- Slab Saws
- Cutting Saws

Application:

- + Sapphire
- + Ruby
- + Emerald
- + Opal
- + Petrified Wood
- + Jade
- + Agates
- + other lapidary materials

Item No.	Outside Diameter	Diamond Thickness	Diamond Height	Arbor Size (ID)	Suggested Retail Price	Our Price
23-4671W	4" (101.6mm)	.020" (0.5mm)	.20" (5mm)	5/8-1/2"	\$60.00	\$47.00
23-4673W	6" (152.4mm)	.014" (0.35mm)	.20" (5mm)	5/8"	\$64.00	\$54.00
23-4673W1	6" (152.4mm)	.014" (0.35mm)	.20" (5mm)	1/2"	\$64.00	\$54.00
23-4674W	6" (152.4mm)	.020" (0.5mm)	.276" (7mm)	5/8-1/2"	\$68.00	\$56.00
23-4675W	6" (152.4mm)	.032" (0.8mm)	.276" (7mm)	5/8-1/2"	\$70.00	\$64.00
23-4678W	8" (203.2mm)	.025" (0.6mm)	.276" (7mm)	5/8-1/2"	\$79.00	\$59.00
23-4679W	8" (203.2mm)	.032" (0.8mm)	.276" (7mm)	5/8-1/2"	\$80.00	\$61.00
23-4712W	10" (254mm)	.040" (1.0mm)	.276" (7mm)	5/8-1/2"	\$102.00	\$88.00
23-4716W	12" (300mm)	.0512" (1.3mm)	.394" (10mm)	1-3/4"	\$188.00	\$178.00
23-4717W	14" (350mm)	.0512" (1.3mm)	.394" (10mm)	1-3/4"	\$226.00	\$198.00
23-4718W	16" (400mm)	.0512" (1.0mm)	.394" (10mm)	1-3/4"	\$255.00	\$234.00

B - Bushed. All sizes are in stock and ready for same day delivery. Other sizes, thickness, & arbor sizes available upon request. Very competitive **Quantity Discounts** available. **Warranty:** 100% Quality is Guaranteed.

Other Sizes available upon request:

4" x .014", 5" x .014", 5" x .020", 7" x .020", 7" x .025", & 7" x .030" (frequently in stock)

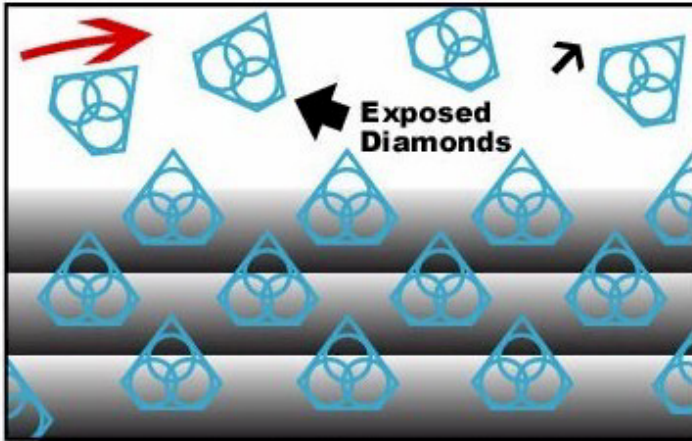


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The newly exposed diamonds don't effect diamonds already working on the material. Unlike many other diamond bonds, diamonds in a Smart Cut remain sharp and grow sharper with each cut. Prolonging product life and consistent performance.

In 1998 UKAM Industrial Superhard Tools, Division of LEL Diamond Tools International, Inc. introduced a new breakthrough: **SMART CUT™** technology in manufacturing **ULTRA THIN & HIGH PRECISION** diamond blades. **ADVANCED TECHNOLOGY** that **REDEFINES THE STANDARD IN CUTTING & DRILLING**. 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 left. **Click on diagram for more information**)

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:

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 for blades 4" to 10" and **10mm diamond depth** for blades 12" to 16" allows the blade to last **80% to 40% longer** on the hardest materials (such as sapphire, ruby, agate, opal, and etc.)

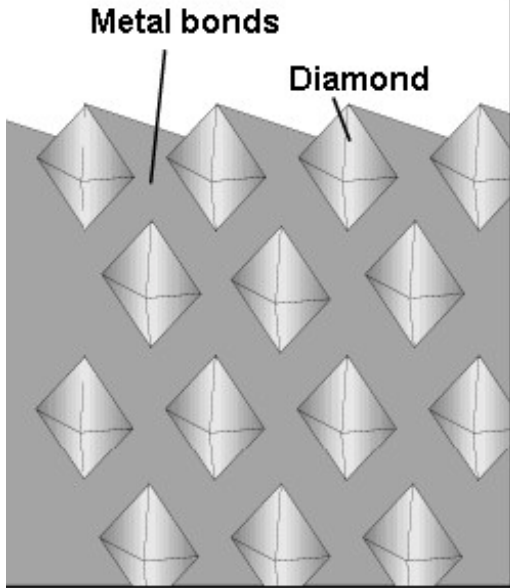
superior coolant system - these blades are designed to cut with or without oil. We feel it is more preferable to the user to use water as a coolant. Oil does not a proper coolant for this procedure, as most other manufacturers would suggest. Water is a true organic coolant, witch does not leave the material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

REAL TIME & MATERIAL SAVERS - minimizes and almost eliminates work required after cutting, such as grinding & polishing. The blade performs several operations, grinding & polishing material as it cuts. **SMART CUT™** Diamond Lapidary Blades are the **THINNEST Sintered (metal bond) Diamond Blades commercially available for lapidary** (precious & semi precious stone) application today! The Diamond Thickness (TH) specified is actual thickness of diamond section, not core thickness. **The time & material you will save is worth the price of these blades alone.**

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 cutting.**



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Sintered (Metal bonded) diamond blades are "impregnated" with diamonds. **Diamond multiple (hundreds) layers of diamonds impregnated inside the metal matrix.** E types of diamond blades for lapidary application have only one layer of diamond that Diamonds in a sintered (metal bond) diamond blade are furnaces sintered in a matrix nickel, bronze, copper, tungsten, alloys of these powders or other metals in various com compacted materials are then hot pressed or sintered to full density. Heating rate, ap temperature and holding time, are all controlled according to the matrix composition. selected diamonds are mixed and sintered with specific metal alloys to achieve the b possible on any materials such as sapphire, agate, emerald, ruby, opal, petrified wo metal bond surrounding the diamonds must wear away to continuously keep re-expo the diamond tool to continue cutting. **Sintered (metal bonded) diamond tools are r cutting hard materials from 45 to 75 on Rockwell Scale (5 to 9.5 on mohs scale**

It is more wear resistant and holds diamond well in place, usually producing the **highest yield/cutting & best price per cut ratio.** **Metal Bond (sintered) diamond blades longer than other diamond bond blades such as electroplated (nickel bond), notched, or colled rolled blades.** They wear evenly, and are known for their long life & consistency. **Sintered (metal bonded) diamond blades** are the latest technology available in Diamond Blades. And represent the **BEST VALUE & PERFORMANCE PER CUT.**

UKAM Industrial Superhard Tools is LEADER in manufacturing **ULTRA THIN & HIGH PRECISION sintered (metal bond) diamond blades.** Our products are used across the world in wide variety of industries & applications. **UKAM Industrial** is one of the companies behind the original THIN KERF Sintered (metal bond) diamond blades for lapidary application. Producing blades sold under "private label" for a number of well known equipment manufacturers.

Comparing SINTERED (METAL BOND) DIAMOND LAPIDARY BLADES to Other Bond Types

(electroplated, notched, hot or colled rolled blades)

Sintered (Metal Bonded) Blades

- Hundreds layers of diamond
- Stands up well under aggressive conditions
- Super smooth finish
- Longest lasting blade
- Very Universal

(work on ultra hard to soft materials)

- Most cost effective

vs. Other Diamond Bond Type Blades

- Single layer of diamond
- Cannot be dressed (in most cases)
- Least Expensive
- Shortest Blade Life
- Cannot be used for a number of (ultra hard) materials



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Sintered (metal bonded) blades are the best investment you can make! Although they may cost more than electroplated (nickel bond), hot or cold rolled or some notched lapidary blades, sintered (metal bond) blades will more than pay for themselves in terms of:

Longer Life

Other Bond type blades may cost less, and at first glance may seem like the most cost effective alternative. However, **they will cost you more in the long run.** Depending on material and application, **sintered (metal bonded) blades may last as much as 50 to 100 other diamond lapidary blade types put together.** You can't get more life out of any other blade !!! Instead of constantly putting blades on and off the saw, you will save money by using one blade. This means **cost per cut, sintered (metal bond) blades are the best choice.**

More Consistent performance & Faster Cutting Speed

Other Blade Types have **only one layer of diamond** coated on metal core. Diamonds sit only on the surface. When this diamond portion is peeled off, the blade will slow down, cut on the side (not cut straight) or stop working (cutting) altogether. While other blade types may provide acceptable level of performance softer lapidary materials such as topaz, turquoise, amethyst, and etc. They will immediately burn out on harder materials such as agates, petrified wood, sapphire and etc. Metal bonded blades are sintered and impregnated inside the metal matrix. Multiple (hundreds) layers of diamonds are impregnated inside the metal matrix. Unlike Blade Types, metal bond blades wear evenly, and are known for their consistency. **You will get consistent cutting speed, and overall consistent performance from sintered (metal bonded) blades.**

EXAMPLE OF TYPICAL LAPIDARY BLADE APPLICATIONS

AGATE	OPAL
AMETRINE	ONYX
AMETHYST	PETRIFIED WOOD
AZURILE	RHODONITE
ZIRCONIA	ROUGH GEM STONE
EMERALD	RUBIE
GARNET	TANZANITE
GEMSTONES	TOPAZ
JADE	TOURMALINE
QUARTZ	TSAVORITE
LAPIS LAZULI	TURQUOISE
METEORITES	MANY OTHERS

SUPERIOR QUALITY

SUPERIOR PERFORMANCE & CONSISTENCY

VERY COMPETITIVE PRICE



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HOW TO ORDER



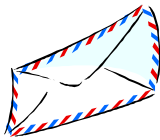
Order by Phone:

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.