



## SINTERED (METAL BOND) DIAMOND CARVING POINTS

**Sintered (metal bond) diamond carving points will last 50 times longer than conventional electroplated diamond carving points**

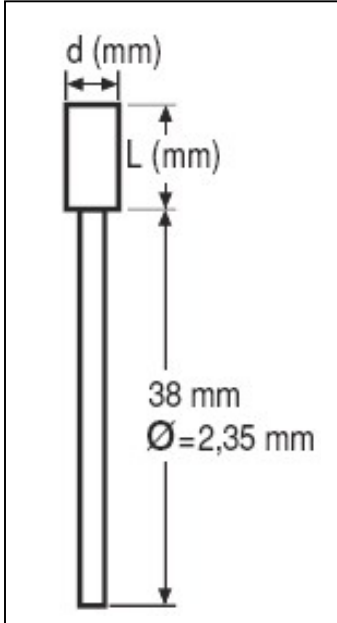
Designed for **carving** a wide range of ultra hard to soft material into intricate shapes. The diamond is all the way through cutting tip for **maximum efficiency** and **superior long life**. Unlike electroplated diamond carving points, metal bond carving points will continue to work as long as portion of the head still remains. Designed for use with all popular hand held machines & must be used with coolant.

True **SINTERED** diamond carving points are produced with a process that uses extreme heat and pressure to bring about the cohesion of diamond particles and a metallic binder material. Each sintered (metal bond) diamond carving point is processed under tons of pressure and thousands of degree temperatures, for several hours, in metal molds. ***This completely eliminates the loss of diamond particles through pull-out which is often a problem with electroplated bonded tools. In addition, the diamond section will never strip off or peel. Diamond head will hold critical shapes for the life of the diamond crystal. Cutting action is fast and easy.***

**D (mm)** – Outside Diameter    **L (mm)** – Diamond Height    **Shank Diameter:** 3/32" (2.35mm)  
**Shank Length:** 38mm    **Other Shank Sizes can be produced:** 3mm (.118") and 6mm (.236")

**Diamond Sizes Available:** 40 microns (500 mesh) to 230 microns (65 grit)

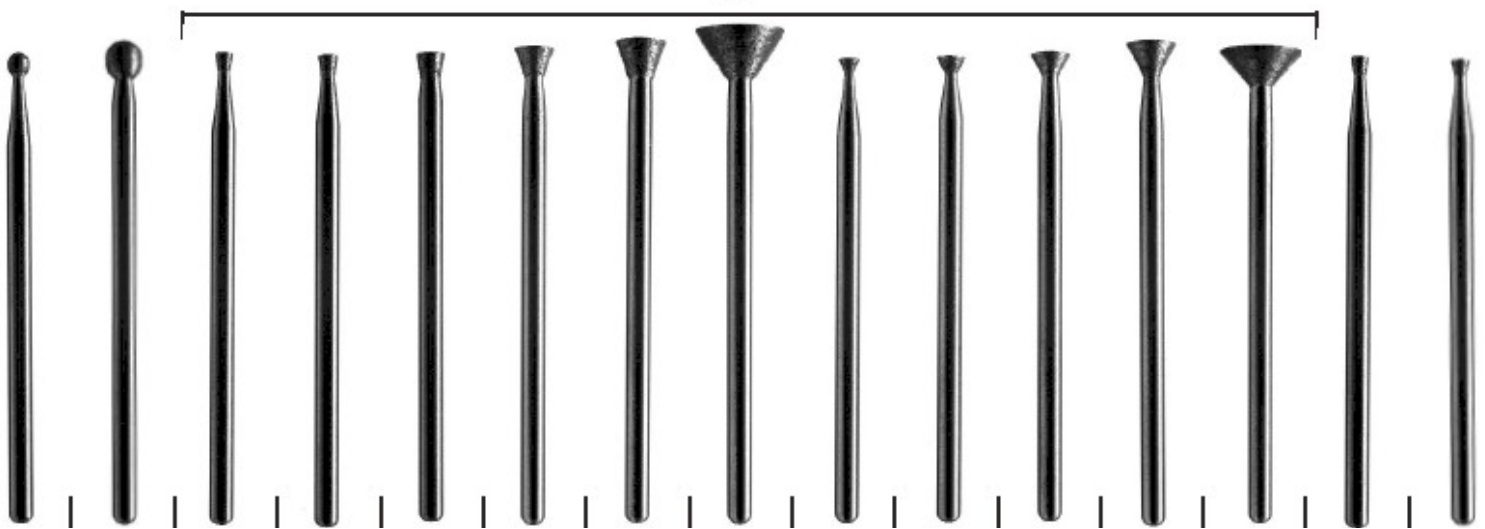
**Typically in Stock:** 70 microns (240 mesh), 80 microns (210 mesh), 110 microns (150 mesh), 160 microns (90 mesh), 230 microns (65 mesh)



### APPLICATION:

- Glass / Quartz
- Natural Stone & Gem Stone
- Ultra Hard & Brittle Materials
- Composites

### SHAPES SHOWN CLOSE TO ACTUAL SIZE



**1      2      3      4      5      6      7      8      9      10      11      12      13      14      15**

d-2.1	d-3.5	d-1.6	d-1.8	d-2.7	d-3.7	d-4.7	d-8.0	d-1.8	d-2.7	d-3.7	d-4.7	d-8.0	d-1.6	d-1.8
L-2.1	L-3.5	L-1.6	L-1.6	L-2.5	L-3.5	L-3.0	L-4.5	L-1.2	L-1.2	L-2.2	L-3.0	L-3.5	L-1.6	L-1.6



# UKAM Industrial Superhard Tools

Division of LEL Diamond Tools International, Inc.

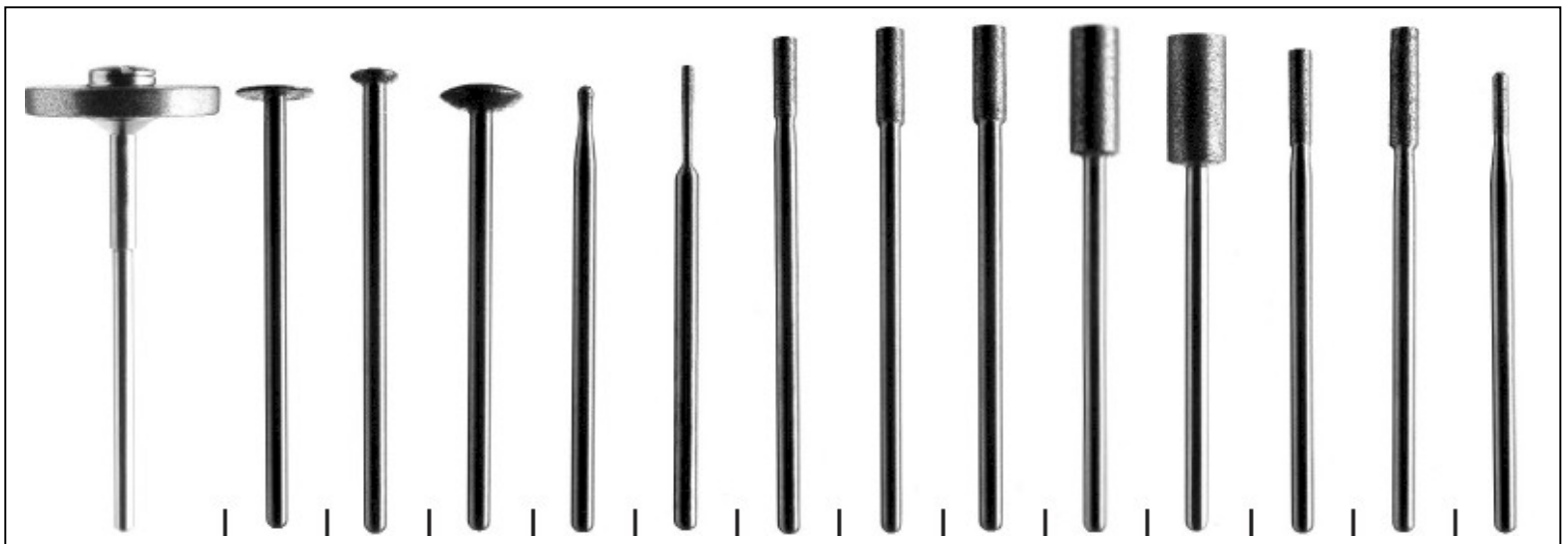
28231 Avenue Crocker, Unit 80 Valencia, CA 91355 USA

Phone: (661) 257-2288 Fax: (661) 257-3833 [www.ukam.com](http://www.ukam.com)



**16      17      18      19      20      21      22      23      24      25      26      27      28      29**

d-2.7	d-3.7	d-4.7	d-8.0	d-1.6	d-1.8	d-2.7	d-3.7	d-4.7	d-8.0	d-2.9	d-4.7	d-8.0	d-16
L-2.5	L-3.0	L-3.5	L-4.5	L-1.0	L-1.0	L-1.5	L-2.2	L-3.0	L-3.5	L-6.0	L-1.5	L-2.5	L-3.0



**30      31      32      33      34      35      36      37      38      39      40      41      42      43**

d-22	d-8.0	d-4.7	d-8.0	d-1.6	d-1.0	d-2.3	d-2.7	d-3.1	d-5.0	d-6.0	d-2.3	d-3.1	d-1.6
L-3.0	L-0.6	L-1.5	L-2.4	L-3.0	L-3.5	L-7.5	L-9.0	L-9.0	L-13	L-13	L-10	L-12	L-6.5

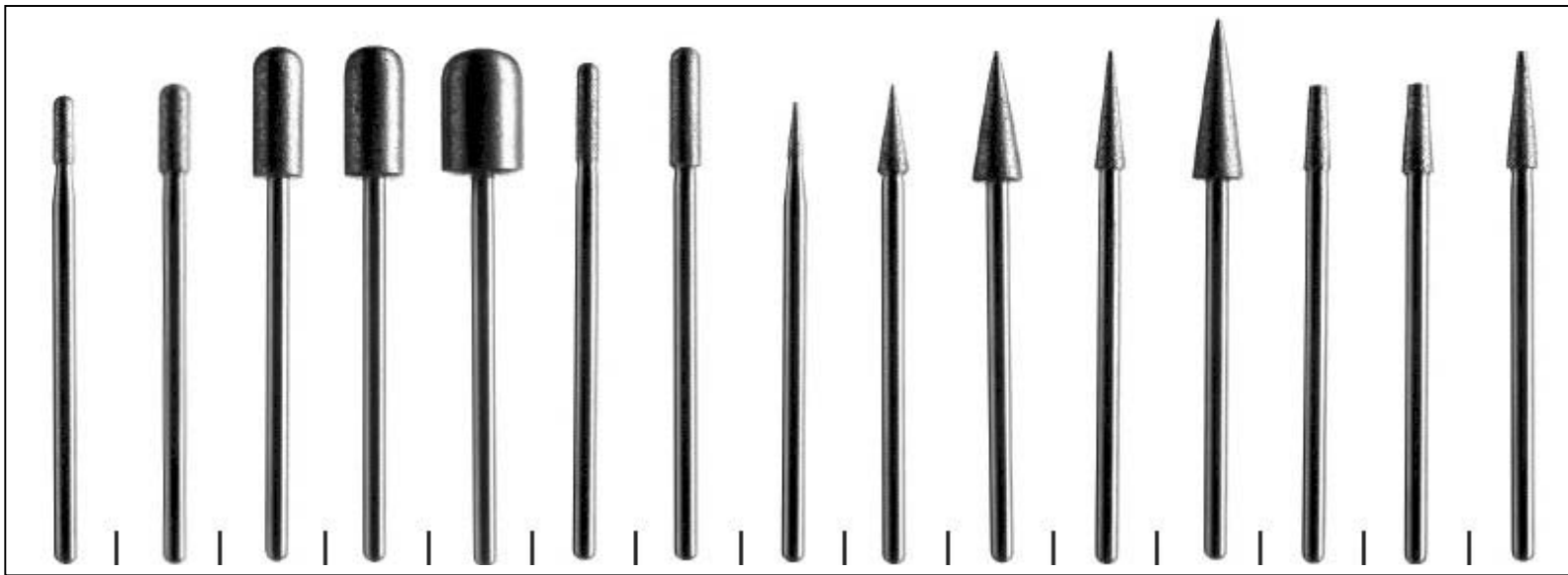


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**44 45 46 47 48 49 50 51 52 53 54 55 56 57 58**

d-2.1	d-3.1	d-5.0	d-6.0	d-8.0	d-2.3	d-3.1	d-1.6	d-3.1	d-5.0	d-3.1	d-5.0	d-2.7	d-3.1	d-3.1
L-7.0	L-9.0	L-13	L-13	L-12.5	L-10	L-12	L-5.5	L-9.0	L-13	L-12	L-16	L-8.5	L-9.0	L-12



**59 60 61 62 63 64 65 66 67 68 69 70 71 72**

d-2.1	d-3.1	d-4.0	d-2.3	d-3.1	d-1.6	d-3.1	d-3.1	d-5.0	d-8.0	d-5.0	d-5.0	d-5.0	d-6.0
L-7.0	L-9.0	L-10	L-10	L-12	L-6.5	L-8.5	L-8.5	L-13	L-13	L-10	L-8.0	L-13	L-13



## RESIN BOND DIAMOND CARVING POINTS

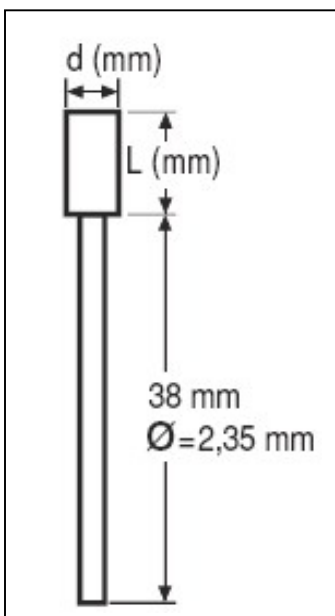
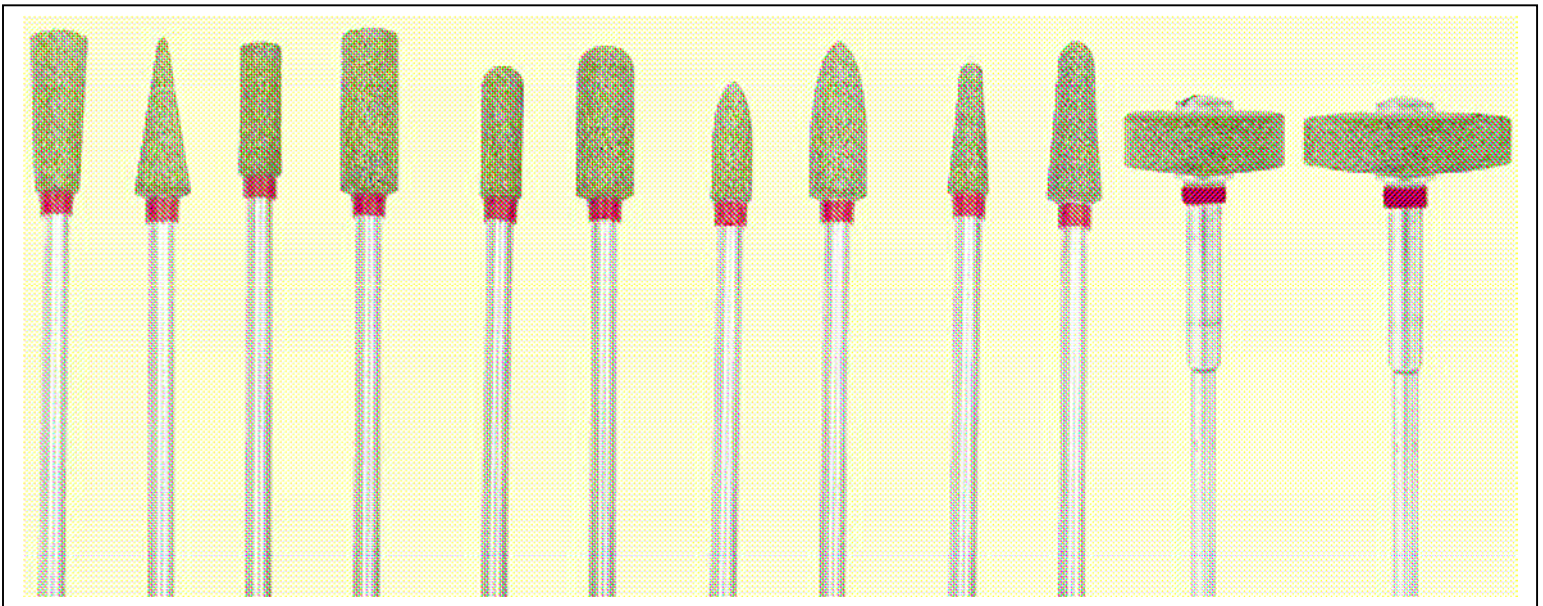
### ADVANTAGES:

- Maximum efficiency, no vibrations, low heat build up
- Ideal for critical work on delicate ceramic parts, ultra hard & brittle materials
- Very good diamond retention, long life length
- Significantly lowers cracking and chipping risks in critical ceramics zones.
- High comfort of utilization. The resin bond acts as a vibration and shock absorber.
- Preserves Material Micro Structure & No material deformation
- No Contamination

### USAGE RECOMMENDATIONS:

- Speed: 12,000 to 15,000 RPM, maximum 20,000 RMP
- Light pressure, to avoid premature wear out
- Dress with 5,000 RPM on wet abrasive green stone

**Shank Diameter: 2.35mm**



### APPLICATION:

- Glass / Quartz
- Optics
- Ultra Hard & Brittle Materials
- Advanced Materials

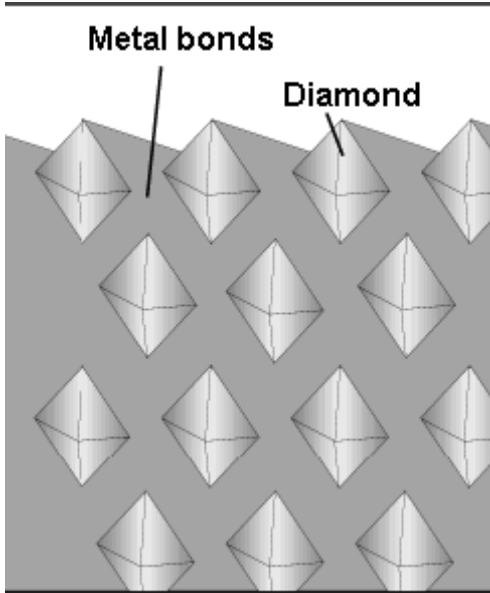
**Diamond Mesh Sizes Typically Available from stock:** 80, 120, 160 microns (other mesh size can be made upon request)

Shapes shown above are in stock.

Almost any other shape resin bond diamond carving point can be produced, 3mm diameter and above. Per customer request

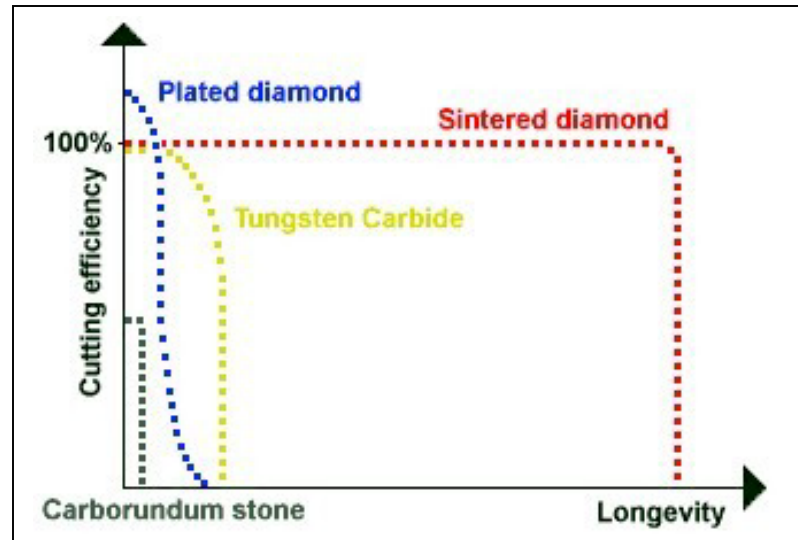


## Why SINTERED (METAL BOND) DIAMOND CARVING POINTS



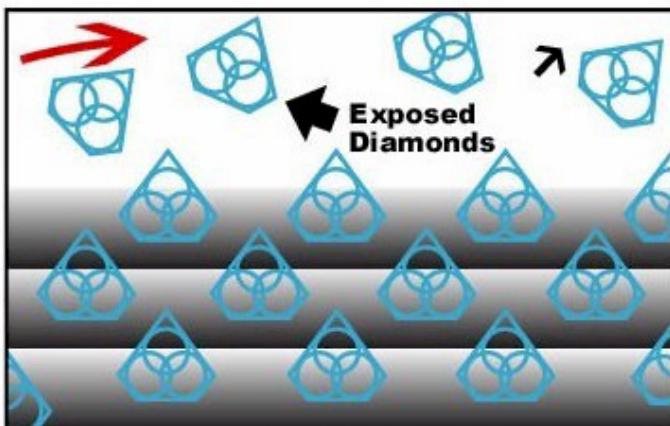
Sintered (Metal bonded) diamond carving have diamonds sintered and multiple layers of diamonds impregnated inside the metal matrix. Diamonds are furnaces sintered in a matrix made of iron, cobalt, nickel, bronze, copper, tungsten, alloys of these powders or other metals in various combinations. Metal Bonded Diamond Tools are "impregnated" with diamonds. The compacted materials are then hot pressed or sintered to full density. Heating rate, applied pressure, sintering temperature and holding time, are all controlled according to the matrix composition. This means that selected diamonds are mixed and sintered with specific metal alloys to achieve the best cutting performance possible on any materials such as sapphire, advanced ceramics, optics, glass, granite, tile and etc. The metal bond surrounding the diamonds must wear away to continuously keep re-exposing the diamonds for the diamond tool to continue cutting. **Sintered (metal bonded) diamond tools are recommended for machining hard materials from 45 to 75 on Rockwell Scale (5 to 9.5 on mohs scale of hardness).** As a general rule of thumb, ***Metal Bond (sintered) diamond carving points last longer than other diamond carving/shaping tools available.*** [Find out more >>>](#)

They can be used in almost all applications ranging from very soft & abrasive materials to ultra hard materials. Typical applications include in order from hardness: Composites, Glass, Concrete, Sandstone/flagstone, Natural Stone, Optical Materials, Precious & Semiprecious stone, Advanced/Technical Ceramics, Ultra Hard & Brittle Materials, Advanced Materials, & Many Others. Sintered (metal bonded) diamond points are used & preferred in most ***Industrial/Manufacturing, R & D, Professional Contractor, & Serious Hobby Enthusiast / Craftsmen*** users. They wear evenly, and are known for their long life & consistency.



***Precision & Accurate tolerances can only be obtained with sintered (metal bond) diamond tools.***

***Sintered (metal bond) diamond tools Require PROPER USE & SOLID UNDERSTANDING of Proper Diamond Drill/Diamond Tool Principals.*** Experience well help as well. Careless handling or use in imprecise machinery will result in diamond tool wrecking/breaking, bending or cracking the bond and will prevent future use.



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.



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## HOW TO ORDER

**Minimum Order for diamond carving Points:** \$100.00 USD (shapes & sizes can be mixed and matched).



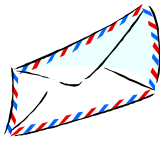
**Order by Phone:**

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.