

Diamond Grinding Wheels For Lapidary(Gemstone)

INNOGRIND Vietnam CO., Ltd. provide a wide range of diamond grinding wheels and related tools for lapidary and jewelry. The aggressive cutting ability and long tool life ensure customer efficient work and durable quality.

The technology process of gemstone manufacturing:



Design&Cutting

Blanking

Gluing

Shaping



Grinding → **Polishing**

1. Design&Cutting

As the first step in gemstone processing, a skilled operator design how to cut the rough stone by checking outer shape and inner defect. It becomes particularly important because the design and cutting will determine the final dimension and shape.



E-Grind provide cutting wheels perfectly work with all kinds stones. Due to different stones have different hardness and toughness, we offer full sizes diamond cutting wheels in metal bond and nickel-based electroplated bond. The perfect cutting ability give very nice surface, no chipping or broken. We always offer the thinnest wheel to help customer to get the biggest stone.



2. Blanking

After cutting, there is one more process to get the stone blank. By using electroplated polishing pad, you can get approximate shape fast from the rough stone.



E-Grind offer all sizes of electroplated grinding disc for different machine.

Diameter from 6" to 16". Grit size from 80# to 1200#.

3. Gluing



After get the stone blank, put it on iron plate and heat mildly till the temperature can thaw the gum. Put some gum on stick and glue the stick and heated stone together. Heat the stone again to make sure strong bonding.

4. Shaping



The stone blank still with irregular surface. You have to grind the stone on grinder to get the rough periphery and table.

For the periphery, we provide Electroplated diamond wheel. The core material could be steel and plastic.

Electroplated diamond wheel	6", 8"	1", 1-1/2", 2"	1"	Steel body, Plastick Body	60#
					80#
					100#
					180#
					220#
					360#
					600#



Plastic Body

Steel Body

For the table, we provide Electroplated grinding disc. Diameter from 6" to 16". Grit size from 80# to 1200#.

5. Grinding

Grinding process removes excess material left from the irregularities found in the stone so it can be successfully smoothed and polished.

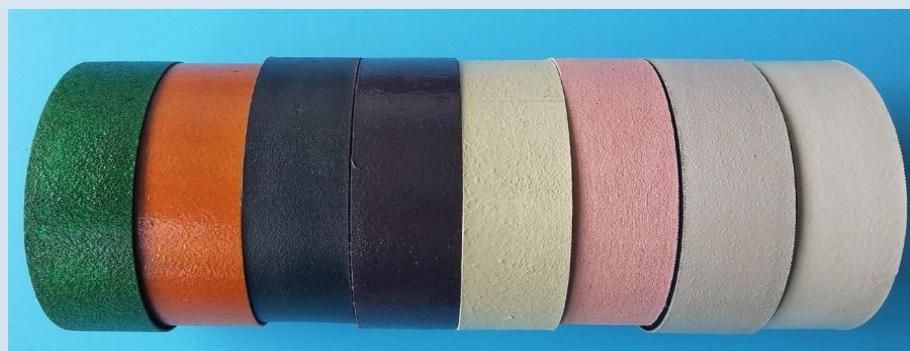
Usually there are three steps to get the final shape: roughing, finishing and smooth.

1. Usually the roughing process is completed by Electroplated diamond wheels. Some stone is too soft and easy crack by too much grinding heat. We recommend soft resin bond diamond wheels .Grit size #60, #80, #100 and #180, depends on stone Physical Properties. We offer both steel core and plastic core to match all kinds of cabbing machine like **CabKing, Pacific, Pixie, Kingsley North, The Titan Complete, Barranca...**

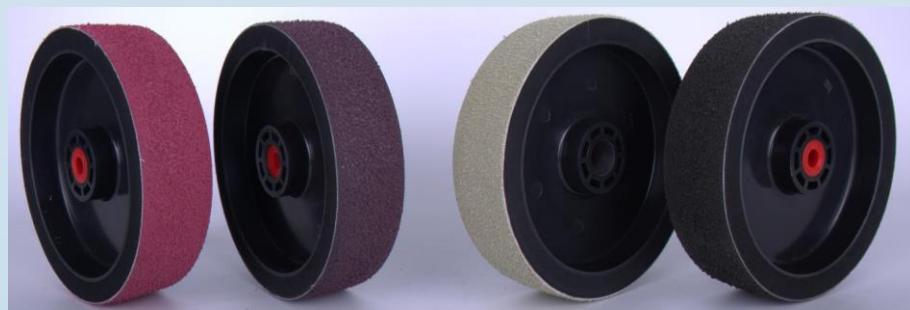
2. Finishing can be completed by electroplated diamond wheel and soft diamond wheel. Grit size #220 to #600. Before move to next step, make sure the stone is symmetrical and has proper curvature. Also make sure no coarse scratches on stone surface.

3. Smooth process has to be done by using soft resin bond diamond wheel. Before each step, you have to wash your hands and stone thoroughly because any diamond grit in last process can cause deep scratches in new process. Start with #600 then 1200# and 3000#, the surface of your stone should be very smooth with no visible scratches at all.

E-Grind provide two types of soft resin bond diamond wheel, standard type and Burr type. Burr type is second generation, cut faster and last longer.



Standard Type



Burr Type

Standard Type Soft Bond Diamond Wheel	6"	1-1/2"	1"	With Bushing	60#
					140#
					280#
					600#
					1200#
					3000#
					5000#
					8000#
					14000#
					50000#
Burr Type Soft Bond Diamond Wheel	8"	2"	1"	With Bushing	60#
					140#
					280#
					600#
					1200#
					3000#
					5000#
					8000#
					14000#
					50000#

6. Polishing

There are many different polishing methods and tools. You can do polishing with soft resin bond diamond wheels in super fine grits like #5000, #8000, #14000 even #50000. Or you can do it by using polishing pad and polishing agent. The most polishing agents used in lapidary work are tin oxide, cerium oxide, chromium oxide and diamond paste.

We provide single crystal diamond past in syringe package. Grit size available 0-0.25 to 40-50 micron. Standard package is 5 Gram each syringe.



GRIT SIZE IN US STANDARD	GRIT SIZE	Water-solubility Diamond Paste Color	Water-solubility Diamond Paste Color code	Fat-soluble Diamond Paste Color	Fat-soluble Diamond Paste Color code
0-0.25	W0.25		Grey		Grayish white
0-0.5	W0.5		Pale pinkish purple		Faint yellow
0.5-1.5	W1		Rake white		Yellow
1-2	W1.5		Incarnadine pink		Brown green
2-4	W3.5		Peach red		Nattier blue
2.5-5	W5		Blue-green		Blue
4-8	W7		Calamus		apricot yellow
6-12	W10		Silvery grey		Bright pink
8-16	W14		Blue gray		Bright red
10-20	W20		Pea blue		Dark purple
20-30	W28		Dark blue		Dark grey
22.36,36-54	W40		Matcha		Deep cyan

7. Final Stone



CUSHION

EMERALD CUT

PEAR



MARQUISE

PRINCESS CUT

RHOMBUS



ROUND BRILLIANT

HEART

TRILLIANT

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