

# Instructions for Use and Care of Galaxy Metal-Bond Diamond Wheels



Please  
Read  
Carefully  
Before  
Using  
Wheels

Galaxy metal-bond diamond grinding wheels are designed to provide the gem-cutter with a smooth, fast-cutting, true-running surface ideal for working stones. The diamonds in a Galaxy Wheel are held on a heavy steel ring by an extremely hard, heat-resistant nickel alloy plating. The ring is mounted on a tough, glass-filled polyester core, making a smooth, quiet running wheel.



**WARNING:** This product can expose you to nickel, which is known to the State of California to cause cancer.

For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**Use and Maintenance:** For longer wheel life, and to prevent wheel damage, the following practices should be followed when using your Galaxy Wheel.

1. Use a light to medium pressure when grinding stones. Although diamonds are extremely hard, they are also quite brittle and can be easily shattered by excessive pressure or the bumping of a heavy rock. The wheels cut most effectively with a light to medium pressure and will last longer as well.
2. Use a steady rest to avoid uneven wear patterns. Steadying your hand while grinding will help prevent bumping and chattering that causes uneven and excessive wear of the wheels. It will also help prevent damage to stones.
3. Use a coolant while grinding. Water is best and a small amount will normally do to keep the wheels wet. This prevents the formation of rock dust, keeps your stone cool, and stops the building of rock residue on the wheel surface which can slow down cutting action. When grinding soft materials such as onyx or turquoise, more water is needed in order to keep the wheel clean.
4. Use the entire surface of the wheel as you grind your stone. Avoid using just the center or edge or any one area of the wheel surface as this will cause excessive wear in that area



and shorten the effective life of the wheel. When grinding crosses, hearts, fire agate, etc., be certain you grind with the diamond covered surface, not on the bare metal side of the wheel, as this will undermine the diamonds and cause excessive wear of the wheel edge.

5. Reverse the wheels occasionally so that the diamonds cut from the opposite direction. The edges of the diamonds will wear with use, and the cutting speed will decrease. By reversing the wheel, the cutting edges of the diamonds are renewed. (If your wheels are 6" x 1-1/2", and mounted on a Genie, the 80 and 220 grit wheels will be interchanged when you reverse the direction of the two wheels.)
6. Galaxy Wheels are machined to run true, but must be adjusted to your individual arbor when first mounted, or remounted.

It is important when mounting wheels on an arbor to adjust their positions so that imperfections tend to cancel rather than add. For example, a high spot on a wheel should not be positioned over a high spot on the arbor shaft. Also, when two wheels are mounted side by side, the heaviest points on their rims should be positioned opposite each other rather than together. Since the imperfections referred to would be measured in thousandths of an inch or tiny fractions of an ounce, you might think that precision instruments are needed for aligning the wheels.



Actually, proper adjustment can be simply accomplished for all practical purposes by the following procedure.

First, make certain that the flanges on your arbor are clean and smooth. Mount the wheel on the arbor and tighten the nut. Turn on the motor on just long enough to rotate the wheel and observe whether it is running true. If there is a "wobble" or "bounce", loosen the nut and rotate the wheel in either direction approximately one-quarter turn. Tighten the nut, turn on the motor for a moment and check again to see if the wheel is running true. Repeat this process until the wheel is positioned on the shaft where it will run true.

A wheel that is not balanced properly on the shaft will begin to wear prematurely at the "high spot". If such a spot should begin to appear on your wheel, check it once again to make certain it is properly balanced on the shaft.

## Questions/Technical Support:

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