



Apollo Ring Saw

INSTRUCTION MANUAL



GEMINI SAW COMPANY
3300 KASHIWA ST. • TORRANCE, CA 90505
310-891-0288 • www.geminisaw.com • e-mail: info@geminisaw.com



Our Mission Statement:

To provide machines to the industry which are different, dependable, long-lasting, attractive, and innovative beyond the state of the art. To listen to our customers, to provide the best possible customer service and treat all persons with whom we come in contact with dignity, integrity and respect.

To all Apollo Ring Saw owners:

We want to thank you for choosing Gemini Saw Company, manufacturers of the most advanced shape cutting machinery today. We believe that you will find the all new, patented Apollo Ring Saw to be the most important key to unlocking your imagination and speeding you on your way to creating new and wonderful shapes never before possible.

The Apollo Ring Saw incorporates many new capabilities most of which have come from listening to you, our customers. We believe that you will find these machines easy and fun to work with. To further develop confidence in your new machine, we suggest that you familiarize yourself with the manual. Please take the time to read about the machine's basic operations. The "Dos and Dont's" and "Saw Care and Maintenance Information" contained on pages 7 and 8 will come in very handy and allow you to get to work quickly.

Please feel free to call us if you have any questions or grey areas concerning your new saw or its operation.

Thanks again. We appreciate your business.

Respectfully yours,

Jesse G. Cogswell
President

P.S. We always appreciate receiving photos of our customers' creative cuts and designs!

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Assembly/Contents

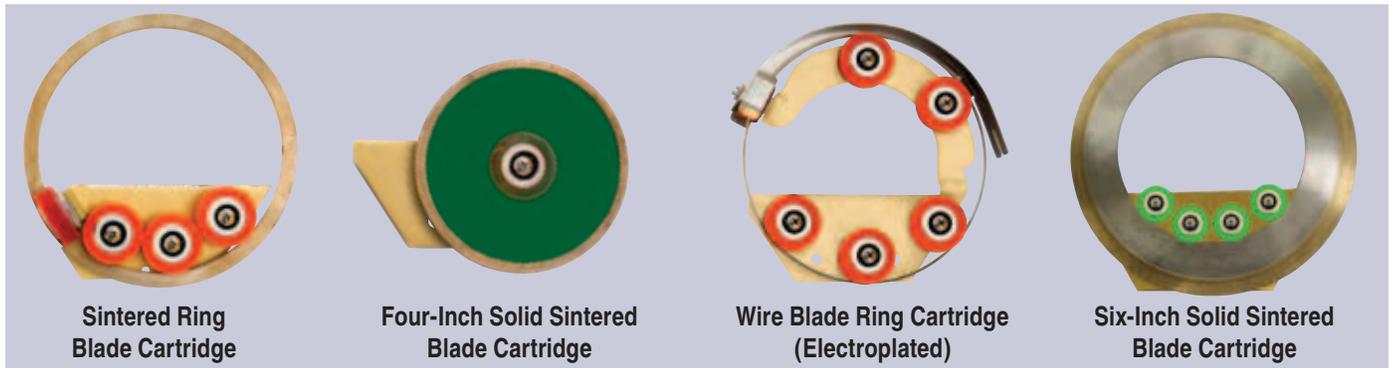
The Apollo Ring Saw is shipped in two (2) boxes. One box contains the saw plus one or more Blade Cartridges. The other box contains the Slide Tray, Magnetic Angles, and Mounting Hardware.

Depending on configuration, the saw may include a Sintered Blade Ring Cartridge for precision slicing and gentle curve cutting

(backwards and forwards) in glass and stone; a Wire Blade Ring Cartridge for extreme cutting detail and omni directional cutting; a Solid Sintered Blade Cartridge for standard straight cuts in all materials — available in four-inch standard or six-inch standard and fine.

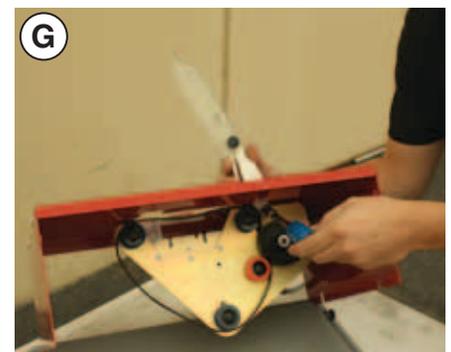
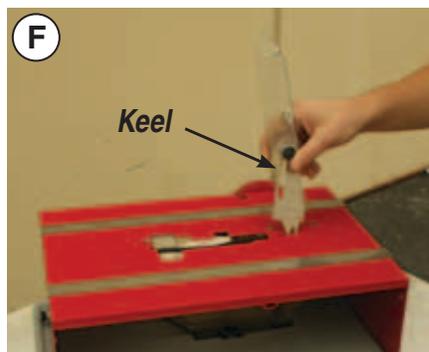
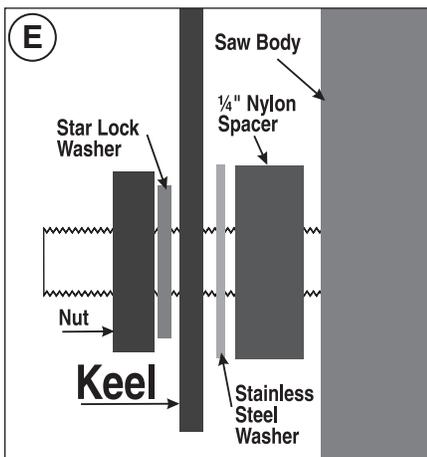
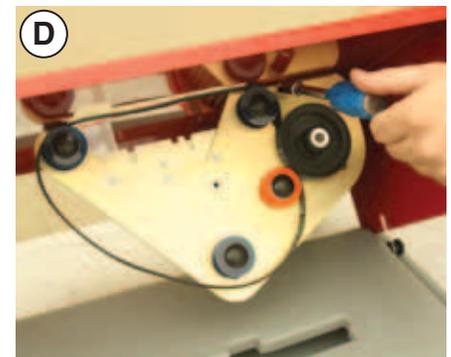
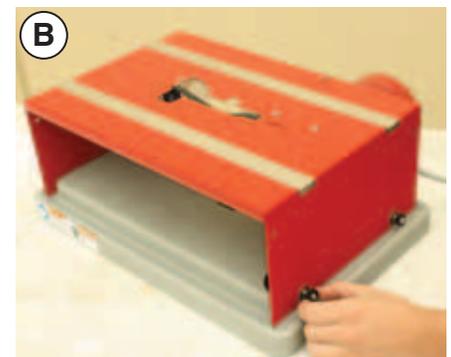
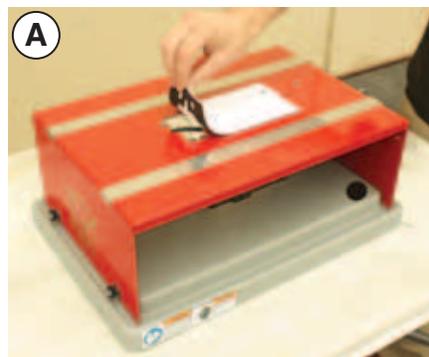
Six-inch versions will cut up to three-inch thick materials; four-inch versions will cut up to $\frac{3}{4}$ inch.

Other blade cartridges and accessories will become available (such as a grinding and polishing station coming soon); refer to www.geminisaw.com.



Saw Setup

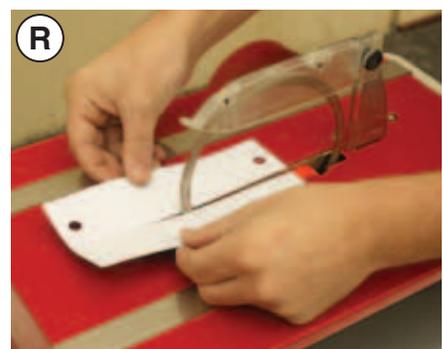
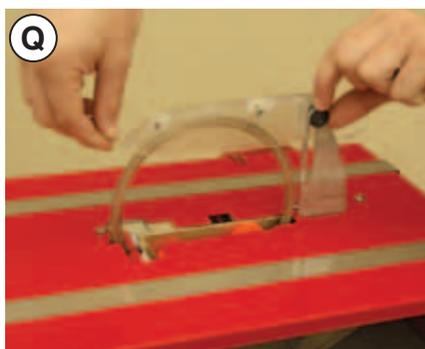
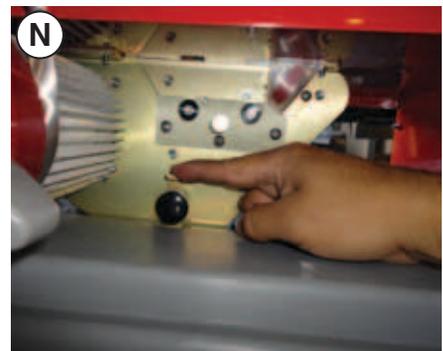
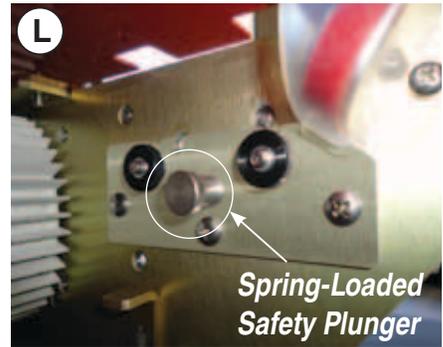
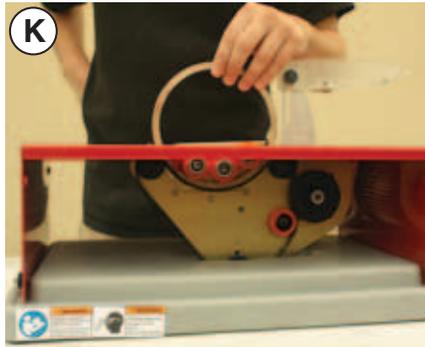
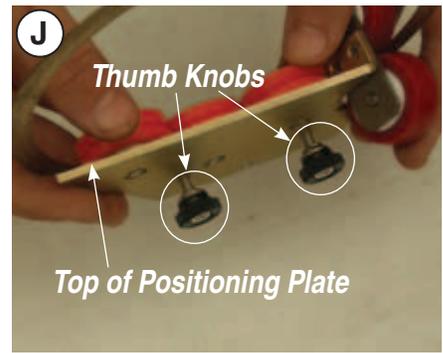
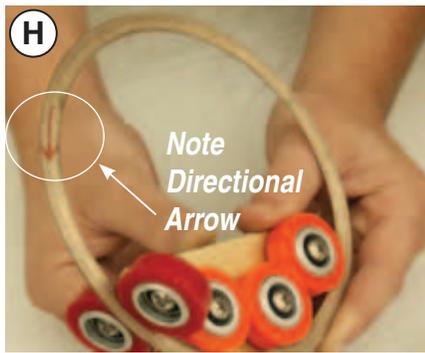
1. Remove and set aside Magnetic Filter Plate (Figure A).
2. Loosen the four (4) Thumb Nuts. (Figure B).
3. Tilt saw and remove the Clear Plastic Cover. (Figure C).
4. Remove the 8-32 Hex Nut and Star Lock Washer. Leave Spacer and Washer in place. (Figure D).
5. Insert Keel from the top slot; secure with Star Lock Washer and 8-32 Hex Nut. (Figures E, F & G).



Sintered Blade Cartridge Installation

Note: All cartridges install in the same basic fashion. The installation of the Sintered Ring Blade Cartridge will be shown in detail:

1. Be sure Spring-Loaded Safety Plunger is pulled out all the way, turned and locked, so that it does not interfere with cartridge installation. (Figure L).
2. Insert the blade with the directional arrow pointed in a counterclockwise direction as shown. Make sure that the blade rests in the grooves of the orange pulleys, and is sandwiched between the red pulleys. (Figure H).
3. Loosen both Thumb Knobs. Note: We suggest loosening the knobs to have plenty of wiggle room. (Figure J).
4. Hold the blade/cartridge from the top and lower it into the saw. (Figure K). Note: The blade should be positioned in the center groove of the rubber belt and that the top of the positioning plate (Figure J) should align with the top of the saw. (Figure M). Tighten each Thumb Knob. (Figure J).
5. Turn and push the Spring-Loaded Safety Plunger all the way in to lock cartridge in place. (Figure L).
6. Loosen Belt Tension Knob and move Tension Slider Control down and retighten to adjust belt tension. (Figure N). Note: Tension can vary for each blade cartridge.
7. (For setup only.) Double check the Keel Hex Nut, making sure it is tight. (Figure O).
8. Install the Clear Plastic Cover (*only necessary during initial setup*) onto the back plate and tighten the Thumb Screw (Figure P).
9. Adjust the Splash Guard to the desired height and tighten the wing nut. Note: Adjustment is correct when magnets float closely over the blade without touching. Note: Little cuts in the magnets may occur and will not affect magnetic pull. (Figure Q).
10. Place the Magnetic Filter Plate over the screw heads. (Figure R).



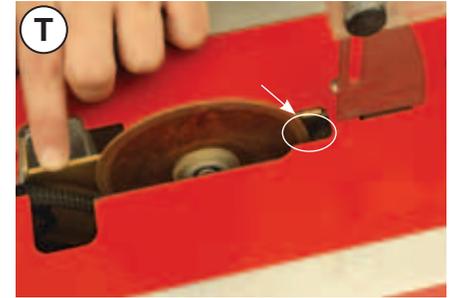
Solid Sintered Blade Cartridge Installation

Note: All cartridges install in the same basic fashion. Refer to the Sintered Blade Cartridge Installation section for full details.

1. Be sure Spring-Loaded Safety Plunger is pulled out all the way, turned and locked, so that it does not interfere with the cartridge during installation or removal. (Figure L).
2. Loosen both Thumb Knobs. Note: We suggest loosening the knobs to have plenty of wiggle room. (Figure J).
3. Loosen Belt Tension Knob (Figure N).
4. Lower the blade cartridge into the saw. (Figure S). Note: The blade should be positioned in the center groove of the rubber belt and that the top of the positioning plate (Figure J)



5. Turn and push the Spring-Loaded Safety Plunger all the way in to lock cartridge in place. (Figure L).
6. Move Tension Slider Control down to adjust belt tension. (Figure N). Note: Tension can vary for each blade cartridge. Tighten Belt Tension Knob.
7. Adjust the Splash Guard to the desired height and tighten the wing nut. Note: Adjustment is correct when magnets float closely over the blade without touching. Note: Little cuts in the magnets may occur and will not affect magnetic pull. (Figure Q).
8. Place the Magnetic Filter Plate over the screw heads. (Figure R).



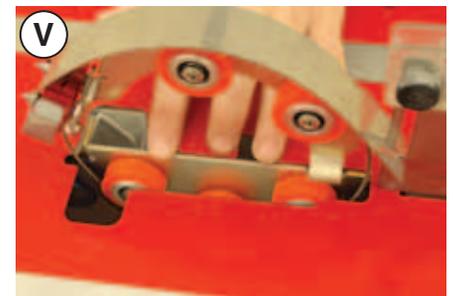
Wire Blade Blade Cartridge Installation

Note: All cartridges install in the same basic fashion. Refer to the Sintered Blade Cartridge Installation section for full details.

1. Be sure Spring-Loaded Safety Plunger is pulled out all the way, turned and locked, so that it does not interfere with the cartridge during installation or removal. (Figure L).
2. Loosen both Thumb Knobs. Note: We suggest loosening the knobs to have plenty of wiggle room. (Figure J).
3. Loosen Belt Tension Knob (Figure N).
4. Lower the blade cartridge into the saw. (Figure U). Note: The blade should be positioned in the center groove of the rubber belt and that the top of the positioning plate (Figure J) should align with the top of the saw and not stick up. (Figure V). Tighten each Thumb Knob.



5. Turn and push the Spring-Loaded Safety Plunger all the way in to lock cartridge in place. (Figure L).
6. Move Tension Slider Control down to adjust belt tension. (Figure N). Note: Tension can vary for each blade cartridge. Tighten Belt Tension Knob.
7. Adjust the Splash Guard to the desired height and tighten the wing nut. Note: Adjustment is correct when magnets float closely over the blade without touching. Note: Little cuts in the magnets may occur and will not affect magnetic pull. (Figure Q).
8. Place the Magnetic Filter Plate over the screw heads. (Figure R).

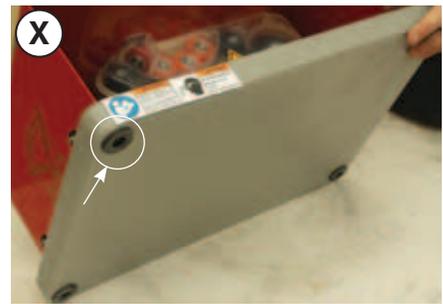
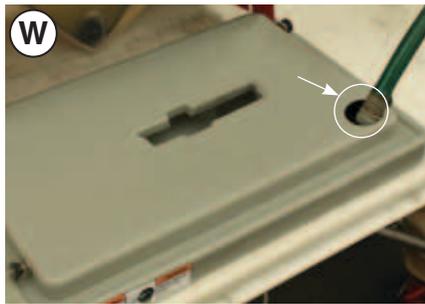


Filling With Water

1. Fill the tub all the way up with water. **NEVER USE SAW WITHOUT WATER!**

Note: Each of the four (4) tub feet is removable for draining water. To empty out water simply remove any one of them. (Figure X).

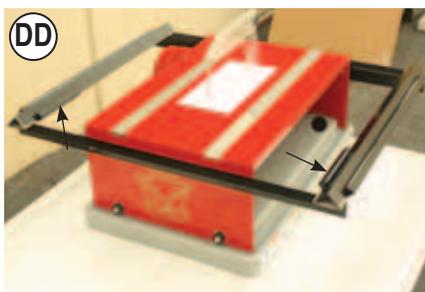
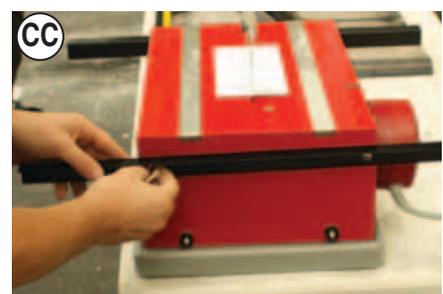
2. Mount the Saw on the Water Tub, making sure that the washers are on the outside. Tighten the Thumb Nuts. (Figure Y).



Installation of Slide Tray

Slide Tray and Mounting Hardware comes shipped in a separate box. (Figure Z).

1. Remove and discard Mounting Clip and White Foam Packing. (Figure AA).
2. Install Front and Back Mounting Rails using screws and washers. *Do not fully tighten screws at this time.* (Figures BB, CC).
3. Install Left and Right Rails. Carefully note mounting position. Inner U-Channels must be located at the front of the saw. Use provided nuts and washers to install. *Do not fully tighten screws at this time.* (Figures DD, EE).
4. Install Slide Tray as shown so that the tray sits on top of the rails and under the inner and outer U-channels. (Figure FF and DD).



5. Place a magnetic angle on either side of the black zero mark. Slide the tray forward until the full blade appears to be in dead center front to back between the magnetic angels. (Figure GG). Tighten all tray hardware. (Figure HH).
7. The cut is square when the cut made by the front of the blade passes through the back of the blade. (Figure JJ). Note: Minute adjustments, if necessary, can then be made by loosening the two screws holding the rear rail and lightly tapping left or right with the handle of a screwdriver (Figure KK) and then tightening the screws.

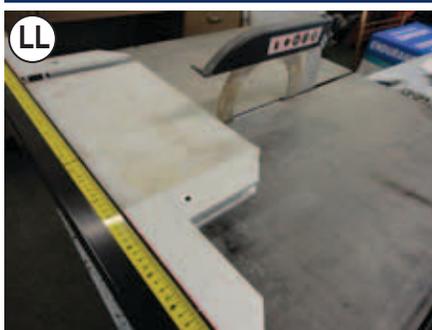
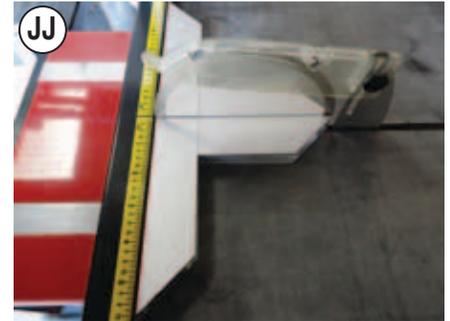
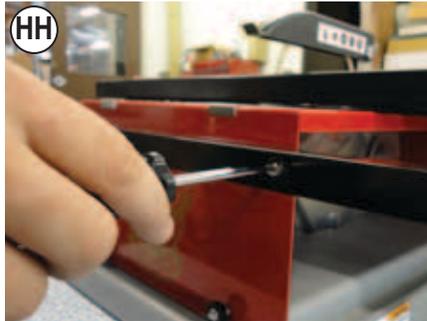
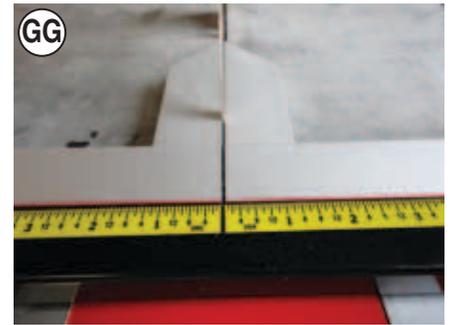


Figure LL: Straight cutting using the Magnetic Angels.

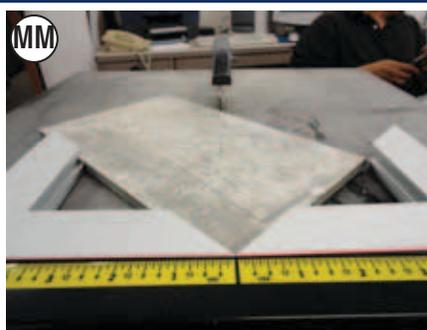


Figure MM: Diagonal cutting using the Magnetic Angels.



Figure NN: 45° Mitre Cutting using the Magnetic Angels.

Apollo Saw Do's and Don'ts

1. **Never use the saw dry!** Always use water. If it is wet and you wish to check something you can flick it on for a second or two but never try to cut with the saw unless it is sitting in the water bath full of water.
2. **Always use eye protection.** You never know when a loose piece of material can pop up and hit your eye so be careful and always use eye protection.
3. **Always use genuine Gemini Saw Co. parts for your saw.** We have taken the time to make them right the first time so copies (if or when they exist) can endanger the quality of your experience and void your warranty.
4. **Always unplug your saw when not in use.**
5. **Always unplug your saw if you are going to perform a procedure that requires the removal of the clear side cover.** (Figure C).
6. **Never submerge your Apollo Saw in water, plugged in or unplugged.**
7. **Never allow water from a hose to go directly against the motor end.** Although the motor

end is sealed and dripproof, force from a hose could potentially damage the electronics within.

Apollo Saw Care and Maintenance

BASIC CARE

- When cleaning the Apollo Saw, use a wet sponge or cloth and wipe lightly. Remember, it is a painted steel base and what you have been cutting has created an abrasive paste. Use a lot of water and a light touch.
- Change the water in the water bath regularly.

When cutting soft tile there is a great deal of debris in the bath, and water should be replaced at least two times a day during use. Glass products have the advantage of forming a whole new bottom to your water bath by solidifying. It is a good idea to change the water every few days in this case. When the saw is not in use you do not have to empty it but remember to fill it to the top when you go to use it again as evaporation may have brought the water level down.

- Use furniture polish to make the tray felts run quicker. We use Pledge® and it works really well to spray the felts every so often.
- Sometimes, if sediment builds up on the saw, a few drops of detergent put into the saw will create a lot of suds to clean the smaller parts. Let the saw run a few minutes and then rinse it out.
- The water bath can be put through the dishwasher. Be sure to use a hose to rinse out the heavy sediment prior to washing. Remove all four rubber feet and place vertically into the dishwasher.
- The magnetic filter can be cleaned by rinsing it under the faucet or swishing it in a bucket of water.
- It is a good idea from time to time to take your tray off and allow the felts to dry. This can greatly increase ease of motion.

CUTTING TECHNIQUE

- Always let the blades do the cutting. Forcing the material through the blade will not only cause a slower cut but can also shorten the blade and belt life.
- There is an optimum feed speed (that point at which you get maximum cutting speed for minimal pressure) for each blade in each material — *you can feel it while you are cutting*. Sensitivity to this causes extremely long blade life.

SINTERED RING BLADE:

- “Sintered” means that the blade is comprised of powdered metal with diamond throughout its entirety. This makes the blade last many times longer than electroplated blades and its cut speed remains constant throughout its life. The only change is a slow decrease in size.

- The action of this blade is like a forward and backwards cutting band saw and a radial saw, all combined. They come in both standard and fine formulations.
- These saws can turn on a dime, even in amazingly thick materials, if you take your time and not force them. The ability to cut backwards is hugely useful as you can back out or change direction without having to rotate the material.
- When cutting curves it is necessary to take into account that the trailing edge of the blade also cuts. For this reason on a particularly tight inside curve, you may have to veer away from the edge, trusting the tail of the blade will sweep by and finish it for you.
- Note that if the blade is doing hard work, cutting tight curves through thick material, you may have to lift up the splash guard to get it out of the way. You may get wet but it is acceptable to do this. Try to keep the blade in the vertical position while cutting.
- These blades are tough, but not as tough as the solid blades, so let the blade do the cutting and give it the time it needs to finish. For quick straight cuts, change to a solid type blade.
- Straight cuts with these blades can yield tiny precise slices of material with an almost polished edge. The slower the cut the more accurate it will be. Using these blades, we have actually cut black granite so thin that the slices were transparent.

SOLID BLADE — FOUR INCH (sintered):

- The four inch solid blade cuts well as a tile saw. Because it is peripherally driven it is quite standard and will cut all tiles 2 cm, (3/4”).
- When cutting thicker material (up to one inches thick) with this blade, be careful not to cut into the tray at the end of the cut as the lower part of the blade leads. To do this, put a couple of tile or wood spacers between the material and the end of the tray.
- Solid blades can be pushed harder than any of the other blades. The only caution is to never allow belt slippage. If the belt slips, (the motor makes no sound change), and the blade seems to slow down, stop pushing immediately and tighten the belt tension. If it then persists you must push less hard.
- There can be some breakout at the end of the cut with this blade. Turning the tile upside down when cutting can eliminate this occurrence.

SOLID BLADE — 6 INCH (sintered):

- The advantage of the six inch blades over the four inch blades is that they can come in both standard and fine and can cut upwards of three inch thick material. The cut is more vertical and the blades last longer.
- Solid blades can be pushed harder than any of the other blades. The only caution is to never allow belt slippage.
- If the belt slips, (the motor makes no sound change), and the blade seems to slow down, stop pushing immediately and tighten the belt tension. If it then persists you must push less hard.

WIRE BLADES (electroplates):

- “Electroplated” is one layer of diamonds held on by nickel. The diamond does not wear; it is actually the nickel which wears, releasing the diamond. Electroplated blades do not last as long as sintered blades and the cutting speed changes throughout their life, becoming slower and slower over time.
- When cutting soft or thin materials such as 1/8" art glass, wall tile, etc., the electroplated blades last a long time. How long? This depends on your cutting technique. Get the feel of the cut and the blade can last years. You should get 40-60 hours even if you don't get the feel.
- Keep in mind that as soon as you cut hard or thick material, the high points of the diamonds get knocked off, making them smoother but slower. Fine blades cut smoother but don't last quite as long.
- Electroplated wire blades cut in any direction, which makes them the most versatile blades for shape cutting. They are best restricted to thinner materials such as 1/8" art glass, wall tile, 1/4" acrylic (like plastics) and softer materials.
- These blades cut in any direction, like laser beams, and make an excellent compliment to the sintered ring blades. You can do the majority of the work with the sintered ring blade and the detail with the wire electroplated blade.

We thank you for taking the time to read this manual as you are now armed with knowledge that will make your experience more enjoyable. Thank you for choosing Gemini Saw Company Inc.

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