Rock Tumbler Instructions
Vibratory Tumblers

Vibratory rock tumblers, such as those made by Raytech and Tagit, can polish rocks in a fraction of the time required by rotary tumblers. They also result in polished stones that retain the shape of the rough material, as opposed to the rounded shapes obtained by rotary tumbling. On the other hand, vibratory tumblers tend to be a bit more expensive than their rotary counterparts. However, if 'time is money' and you want to retain more of the shape and size of the original material, then a vibratory tumbler may be just what you need.

Materials List
- A vibratory tumbler.
- Rocks. You will get better results with a mixed load that includes both small and large rocks.
- Filler. Plastic pellets are great, but you can use small rocks having the same or lesser hardness as your load.
- Silicon carbide grit, pre-polish and polish (e.g., tin oxide, cerium oxide, diamond).
- Soap flakes (not detergent). Ivory soap flakes are recommended.

Procedure
- Fill the bowl of the tumbler about 3/4 full with your rock.
- If you do not have sufficient rock to fill the bowl to the 3/4 level, then add plastic pellets or other filler.
- Add the required amount of SiC (silicon carbide) grit and water. See the table below to get a sense of how much is needed. If you have the instruction manual that came with the tumbler, start out with those quantities. Keep records, so if you make changes you will know the effect the changes had on the polishing.
- Place the lid on the tumbler and run the vibrator. Let it run for a day or so and make certain that a slurry is forming. Evaporation will occur, especially if the external temperature is hot, so you may need to add water from time to time to maintain the slurry consistency.

When the rock has achieved the desired smoothness and roundness, remove the load and rinse the bowl and the rocks thoroughly with water.
- Return the rock to the bowl, add a tablespoon of soap flakes, and fill the bowl with water to the top of the rocks. Vibrate the mixture for about half an hour. Rinse the rocks and the bowl. Repeat this step two more times.
- Return the rocks to the bowl and proceed to the next polishing step with the next grit.
- After the final polish step, perform the washing/rinsing process and allow the stones to dry.

Here are some conditions, intended for a 2.5 lb tumbler. You can adjust the quantities for your specific needs. The durations for each step are approximate - check your load and keep records to find the conditions that work best for you. Experiment with different polishing compounds to find the type that works best for your stones.

*Use a slow speed for all steps when polishing stones with Mohs hardness of 6.5 or lower (peridot, opal, lapis, obsidian, apatite, etc.).

Helpful Tips
- Make a balanced load that includes for large and small rocks. For a 2.5 lb bowl, sizes from 1/8" to 1" work well.
- A proper slurry is needed to get the best polish in the least time. If there is too little water, then the thickness of the mixture will prevent proper movement, thus slowing the polishing action. Too much water results in too thin of a slurry, which will result in a much longer time to achieve a polish. The grit may settle out of the mixture altogether.
- Never wash grit down the drain!
- Plastic pellets may be rinsed and reused, but you cannot reuse grit.

Instructions for the Utra-Vibe Industrial UV-10 and UV-18
Polishing rocks in the ultra Vibe-10 and UV-18

When selecting rocks to tumble, remember, the finished product is determined by the quality of rocks with which you start. The rocks you use should be sorted by hardness and roughness. Your rocks may vary in size to include a few up to 1 1/2" in diameter. Vibratory tumblers are most successful on rocks where the shape does not have to be changed a great deal or on rock which have been previously sawed or shaped. Agates and other hard stones should not be tumbled with soft materials such as opal. If you are planning to tumble beach-worn rocks, don't complicate the process by mixing them with hammer-broken rocks.

The industrial Ultra-Vibe should be placed on a firm, smooth, level surface - preferably on uncarpeted floor with ample clearance around it. This allows proper air flow to the motor. DO NOT cover unit with anything to dampen noise as this may block air flow and cause the motor to overheat, or possibly create a fire hazard.

Place your tumbler where it will not be in the way because tumbling takes a number of days of continuous operation and there is a constant sound of rolling rocks connected with rock polishing.

The following are only general guidelines for polishing rocks as most people make modifications in the methods to fit their specific needs.

1. Fill Industrial Ultra-Vibe barrel with enough rocks to fill up past the centerline - approximately 3/4 full. Tighten wing nut in center of barrel securely.

2. Add GRIT (Check chart below for quantity needed for the various size vibratory barrels.) Turn on Tumbler.

3. Begin adding water, a little at a time until the grit starts to cling to the stones which is what sit should do. (Too much water will tend to rinse the grit back off the stones.)

4. Replace tumbler lid to prevent the water from splashing and evaporating. This will also reduce some of the noise connected with rock polishing.

5. The GRIND (120-220 grit) will be the longest and will vary with the roughness and hardness of the stones - from 2 to 7 days. The rocks should be checked two to three times daily because the build-up of "mud" (ground up rock, grit and water) will cause the action in the tumbler to slow down. A small amount of water may be added to restore the action. This is critical because if the action stops significantly, the barrel could be damaged.

6. When desired results in the GRIND (120-220 grit) are attained, the rocks and barrel should be rinsed thoroughly. DO NOT wash grit into sink or drain pipe. Make sure all traces of FINE grit are rinsed from the rocks and barrel. The rocks can then be replaced in the barrel, ready for the next phase of polishing.

7. Follow Steps 2 - 6 for each of the next two phases - PREPOLISH, and finally, POLISH. Use chart below for correct amount of grit for each barrel. These grinds will take only 2 - 3 days each. The stones and barrel should be washed thoroughly between grit changes.

8. After the POLISH you may wish to run the stones for a few hours in a solution of laundry detergent and enough water to make a stiff suds. This will clean off any remaining polish and do a final burnishing job on the stones.

UV-10 IND
GRIND(120/220 grit)_____6 oz
PREPOLISH (500F)_____3 oz
POLISH_____3 oz

UV-18 IND
GRIND (120/220 grit)_____8 oz
PREPOLISH (500F)_____4 oz
POLISH_____4 oz