

Troubleshooting

Not Getting A Good Polish: Hard stones are far easier to polish than soft ones and you will find as you get more familiar with lapidary work, that the secret to success is the careful selection of stones. Try to use well shaped stones that are worth polishing, of roughly the same hardness, size and shape. Try to choose the best stones you can - you will then be happy with the results.

Stones Reducing In Size Too Quickly: If you find that the stones are drastically reducing in size in the first stages of the tumbling process this may suggest that the stones are too soft and may not polish at all. Alternatively you may have tumbled the stones on the coarse grit for too long. If the stones reduce too quickly there may not be any significant tumbling action, there needs to be enough volume of stones in the barrel to sustain the tumbling / polishing action.

Harsh, Banging Noises While Tumbling: When the machine is tumbling correctly it makes a sound rather similar to pebbles being rolled gently from hand to hand. If you hear a harsh, banging noise from the stone it suggests that either you have insufficient amount in the machine or that the mixture needs thickening (some people use a wallpaper paste like Polycel to thicken the water a little so the consistency is more like thin cream. It is especially important at the polishing stage that the stones are not banging hard against each other.

Periodically Relieve The Pressure The May Build Up In The Barrels: During any tumbling process it is possible that gas may be generated in the barrel, it is advisable to lift the side of one of the lids every day or so that the pressure is released. It is remotely possible that pressure will build up in barrel so as a precaution release the pressure to avoid a mishap.

Optional Additional Stage For A High Polish: Some machines use more than three stages of grit however this tumbler doesn't as it has a very good grit breakdown and the grit sizes reduce quickly, so by the end of a weeks running the coarse grit will have reduced to about 200 grit, so you would naturally want to move onto a finer grade like 350 grit, rather than an additional possibly unnecessary stage. As you gain experience you may wish to experiment but we would recommend starting out with harder stones that will achieve a good polish and just with the supplied grits and polish. One additional step that you may wish to add as an optional extra for a high shine is running the machine after the pumice powder stage with a strong mixture of water and washing powder (perhaps two heaped tablespoons of a powder like Daz or Ariel). Do make sure to open the barrel frequently to make sure the stones are not banging together.

If The Barrel Does Not Rotate: Check that the barrel is not under-loaded or overloaded. Dry rollers and barrel thoroughly, ensure there is no oil on the rollers or barrel. If the rollers appear glazed, rub lightly with sandpaper.

If The Belt Slips: Remove the belt, wash and de-grease it, then dry it thoroughly and replace it. Replace the belt if it looks worn. Do not attempt to tighten it as they are precisely tensioned before leaving the manufacturer.

If The Barrel Leaks: This is most likely because you have put the lids on incorrectly. Follow the instructions for opening and closing the barrels on the second page of this leaflet.

Spares & Replacement Parts

Additional barrels, spare lids, replacement belts and grit packs are also available online at kernowcraft.com or call our team on 01872 573888 to order.

Register For 1 Year Guarantee

Remember to register your tumbling machine for a free 1year motor guarantee online at www.beachlapidary.co.uk

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Your Guide To The Tumbling Machine

The tumbling machine is a really popular product and a great investment if you are an avid beachcomber, rock collector or you simply love the magic of lapidary!

You will achieve excellent results if used correctly, so please read these instructions very thoroughly before using and save for future use.

This leaflet provides everything you need to get started with your new machine, with information on caring and maintenance, as well as a troubleshooting guide.



How Does It Work?

Tumble polishers (also known as rock tumblers, lapidary tumblers and rotary tumblers) polish your glass, pebbles, rocks, shells or gems to a matt or gloss finish. They work by 'tumbling' the grit particles around in the spinning barrel which repeatedly fall onto the material being polished and the tiny scratches gradually polish the surface. It works on the same principle as the natural process that smooths pebbles in rivers and on beaches. The grit we sell is silicon carbide which is a hard, sharp, angular material that gradually fractures into smaller angular particles, making it an effective abrasive. You work your way up through the grit grades (like sandpaper and polishing papers) starting with coarse 80 grade to fine 400 grade. Each grit should be handled carefully to ensure you don't get any stray particles from one grade mixed in with another as this could cause scratches when you are trying to smooth the surfaces with tumbling. The polish is a pumice powder that is used as the final stage of tumbling glass and stones to bring your work to a gloss finish. It is worth remembering that polishing is the final step in the tumbling process, it won't remove any scratches left from previous stages of tumbling.

How Many Stones Can You Tumble At Once?

You can fit roughly 20 large-ish stones in the barrel - but it really does depend on the size of the stones. The more tumbling you do the better you will be able to gauge how many stones to put in at once. The largest stone you should polish is about 4cm in diameter.

How Long Do I Need To Tumble Items For?

It depends on the finish you're after, this is something you will pick up over time. Most stones will need tumbling over a period of days - you can always stop and check on your work and put it back in if it requires more tumbling.

How Shiny Will My Stones Be After Tumbling?

It depends how long you've been tumbling them for, but you can obtain a nice glossy finish if you work through all the grits and the polish thoroughly.



How To Use

Select stones that are generally 1" diameter or smaller, one or two larger stones may be polished in a load that consists primarily of smaller stones. To open the long life barrel push either end cap off with your thumbs. When new they are sometimes tight, but if you immerse the barrel in hot water then can be easily removed. When replacing them ensure you have all the surplus air out of the barrel lifting one side with your fingers as you press the centre of the cap with your thumbs - you will hear the air hiss out. Make absolutely sure the caps are on properly. It is very important that the lids are level and as far on as they will go, as if not this could cause the barrel to fall off the rollers.

Step 1: Fill barrel 3/4 full with stones and shake to settle. Do not use less, it will not work as there is no tumbling action unless the barrel is sufficiently filled. Add water to just over the top of the stones and two heaped tablespoons of coarse silicon carbide. For this step 60-100 grade grit is most suitable. Run the machine for a few days and nights while occasionally examining the stones. Fairly smooth pebbles might need only about three days to become nicely rounded while very jagged ones may need ten or more days running and the grit topping up to get the same effect — seven days is a reasonable average. When satisfied proceed to:

Step 2 (Optional): Medium Grind — 220 Grit. Thoroughly clean the stones and barrel by removing both ends. Proceed as before using 220 silicon carbide. It should only be necessary to run this grade for about 5-6 days. As this is an optional step and this grade grit is not supplied in your kit.

Step 3: Thoroughly clean stones and barrel by removing both end caps, washing carefully. Proceed as before using the same proportions of grit and water but this time use 300-400 grit silicon carbide. Please note this stage is very significant and determines the final polish, it is vital you do not cut it short. Allow at least seven days and do not top up with fresh grit as this will re-roughen the stones. Each day on this stage imparts a smoother finish as the grit breaks down and progressively smoothes the stones making it far simpler when proceeding with:

Step 4: Very, very thoroughly clean the stones and barrel. It is advisable to have a separate barrel for polishing, because of the difficulty of cleaning grits completely from the sides of the barrel (additional barrels can be purchased separately). Examine the stones very carefully and make sure that they are very smooth. Discard any stones that are badly cracked or have jagged edges, they can be re-tumbled with your next load. Repeat steps as before using similar amount of water but 2 level tablespoons of pumice powder instead of grit. If the barrel has been cleaned properly and the previous steps carried out correctly seven days running should produce gleaming gems or pebbles.

WARNING: Do not put any of the resulting slurry down the sink — it is inclined to set solid!

Opening & Closing The Barrels

The end caps do not screw on but are a snug push-fit so they may be difficult to remove and replace. To remove, simply submerge the lid end in hot water for a 4-5 minutes and it should come off easily. When replacing the lid, ensure there are no particles around the rim that could stop it sitting squarely and sealing properly and make sure you release any excess air by lifting the side as you slide them down - any air trapped can prevent a proper seal. When lifting barrels filled vertically with compounds inside always support the bottom cap as a heavy load could force the bottom cap off causing the contents to spill.

Important Operating Tips

When you first use the machine it may appear as if the belt is too loose but it is essential that it runs as loose as possible without slipping. Every machine is carefully adjusted and tested before it leaves the manufacturer. If you attempt to tighten the belt it can badly damage the motor and rob the machine of power so it must be loose.

You may also notice that the machine feels rather hot to the touch when running; again this is perfectly normal and providing you can comfortably hold your hand on it there is nothing amiss. Do not however, place the machine inside a box or very close to other things as it is essential that air can flow around it. We advise placing it on an old tray as this makes any cleaning far easier. The barrel will almost certainly move along the rollers until it touches one end of the machine - this is nothing to worry about and you will see there is a stopper which is specially designed so the barrel will gently rub against. Do not try to tilt the machine in an attempt to correct this barrel movement.

Problems With The Machine

The tumbler has been tested and should be trouble free but to ensure successful operation you must ensure the rollers turn absolutely freely, never use fewer stones, if the tumbler appears hesitant to run check all the bearings, a load that is too light may glaze the rollers and barrel through slippage. You will then need to lightly sand them with coarse sandpaper. Do not get oil on the rollers. Excessive belt wear can be caused by a faulty belt (beyond our control) or pulleys knocked out of alignment, the pulleys can be gently prised into line.

Always realise that although the machine has ample power it can not operate if the bearings are locked solid with grit. Ensure to keep your machine clean. Remove plug from mains when cleaning. If your trouble persists, please read the instructions carefully. It is almost certain that the problem is trivial and can be solved with a few minutes thought. The most common problem we have is tumblers that have had their belts tightened, robbing the motor of power and rollers that are not spinning freely - if either roller is tight it is equivalent to driving a car with the hand brake on!

Oiling & Maintenance

The machine is oiled when it leaves the manufacturer and can be used immediately. However, it will need lubricating so use the following procedure:

Weekly

Apply one drop of oil to the steel shafts of the rollers where they pass through the plastic/brass bearing blocks. This is important as the most common cause of problems with barrelling machines is a tight roller which robs the barrel of power.

Every month

Apply one drop of oil to the motor shaft where it protrudes through the side of the machine - this will run into the motor bearing. Use motor car grade oil for oiling the machine as lighter grades are not suitable.



You May Also Like Our Diamond Coated Drill Bits

If you love collecting stones you may also like these diamond coated drill bits! They are electroplated with diamond particles and are the ultimate tool for drilling glass, gemstones, sea glass, pearls, ceramics and more. This means you can drill holes into your tumbled items, allowing you to transform them into jewellery designs!

Head to our website for more information and guidance on this brilliant tool, an information leaflet is also available on the technique required.

Product code: C180, available in a range of diameters