

# Auscut Smooth 1 Rotary Tumbler



## User Guide



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## Operating Recommendations

- a) Read this User Guide thoroughly before operating your tumbler. Do not start using the tumbler if you do not fully understand the operating and safety recommendations.
- b) This tumbler is designed to operate in a well ventilated space at normal room temperature. Do not enclose or restrict air flow - it is normal for the housing to be warm to touch.
- c) Ensure that children use the tumbler only under the direct supervision of a suitable adult
- d) Do not overload the tumbler. Use appropriate quantities that don't exceed the tumbler's capacity.
- e) Never pour the grit slurry down the drain. The slurry hardens like cement and will clog your drain.
- f) Review the following Safety Instructions thoroughly before using the tumbler.

## Safety Instructions



Refer to  
instruction  
manual/booklet



Keep loose clothing,  
hair or jewellery away  
from any moving parts.



**WARNING:** For your own safety, please read the following safety warnings and instructions thoroughly to understand usage, risks and possible dangers.

- 1) Keep the workplace tidy and clean. A messy workplace will lead to work accidents.
- 2) Avoid operating in a dangerous environment, such as flammable liquids, gases, chemicals, or a dusty environment. Sparks may be generated during the polishing process which may ignite the dust or gas.
- 3) Keep a safe distance. When operating the machine, please keep children and bystanders at a safe distance to avoid distraction to the operator and protect their safety.
- 4) The machine must be properly stored and placed in a dry environment and out of reach of children when not in use.
- 5) Sufficient lighting. Operate the machine correctly, safely and attentively in a well-lit and bright working environment.
- 6) Stay vigilant and do not operate the machine when fatigued or under the influence of drugs, alcohol, or medical treatment.
- 7) Wear proper safety devices. Please wear goggles, masks, safety face masks, protective earmuffs, head-mounted protective overs, non-slip safety shoes, and other safety equipment as required to reduce the risk of personal injuries.
- 8) Always disconnect the power cord before moving the machine. Make sure the power switch is off and disconnect the power cord to avoid activating accidentally.

- 9) Always use proper extension power cord. Use of non-compliant power cord may damage the motor.
- 10) Use proper grounding and matching plug and socket. Do not modify the plug, power cord or grounding socket pin. The machine needs to be grounded by using the supplied power cord and plug – these must not be modified in order to avoid risk of electric shock.
- 11) Ensure there is no damage to the power cord and plug – avoid contact with heat, sharp metal edges, oil stains, and moisture. Do not lift machine by the power cord or roughly pull on the cord to avoid damage and risk of electric shock.
- 12) To avoid possible electric shock, only operate the machine using the grounded power cord supplied and ensure it is connected to a socket protected by compliant earth leakage circuit breaker unit.
- 13) Do not operate in rain or a humid environment. Avoid moisture getting into the motor.



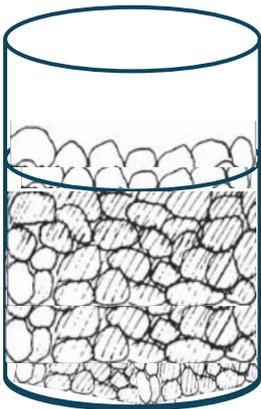
**NOTE: To ensure the safety of the motor, please send it to professional maintenance engineers from the manufacturer or dealer if repairs are required. Do NOT disassemble the motor and repair yourself.**

## Getting Started

Unpack tumbler and prepare to tumble your first batch of rocks:

- Open the barrel by removing the barrel nut and outer/inner lid.
- Load the barrel with rocks to about 2/3 to 3/4 full using a mix of sizes (including some small ones up to a maximum of no more than 45mm).
- Add water up to the base of the top layer of rocks and the recommended amount of the silicon carbide grit.

- Make sure recess for the inner lid is clean and dry when sealing up the barrel. Place outer lid on and secure with the nut – should be firmly tight but not excessively so.
- Place barrel(s) on shafts such that the groove in the barrel nut fits over the barrel guide at either end of the tumbler.
- Turn tumbler on and check it is operating correctly.



### Usage Rates of Grit/Polish

- Add approximately 3 tablespoons of silicon carbide grit for the grinding stages to the 1.5 kg barrel.
- Add approximately 2 tablespoons of polish (cerium, aluminium or tin oxide) for polishing stages to the 1.5 kg barrel.
- Add sufficient water to make a slurry – just up to the top layer of rocks.

## Operating Instructions

### Step 1 – Coarse Grind (#80 Silicon Carbide)

Step 1 is for rough shaping of the stones and grinding off any rough edges. Fill the barrel 2/3 to 3/4 full of rock and add water up to the bottom of the top layer of rocks. Add approximately 3 tablespoons of #80 Silicon Carbide grit. Place barrel on the tumbler with the groove on the nut fitted over the barrel guide to keep it in place. Start the tumbler and check tumbler is operating correctly. Check during the first 6 to 8 hours of tumbling for excess gas – release pressure by opening and resealing lid if required.

## **Step 2 – Medium Grind (#220 Silicon Carbide)**

After approximately a week, move to Step 2 – may take more or less time depending on how rough the rocks are. Wash the rocks and barrel extremely thoroughly, DO NOT POUR GRIT SLURRY DOWN THE DRAIN. Use a strainer to help wash off the rocks – inspect for any cracks or pits which may trap grit. Reload the barrel with the rocks, water and the next stage of grit – approximately 3 tablespoons of #220 silicon carbide grit. Tumble again for approximately a week for the medium stage.

## **Step 3 – Fine Sand (#600 Silicon Carbide)**

Step 3 is for the fine sanding of the rocks – you are aiming for a very fine satin finish ready to take a polish. You will not achieve a good polish if you try to rush any of the previous stages. Fill the barrel as before and add approximately 3 tablespoons of #600 Silicon Carbide grit. If the rocks have lost volume so that the load in the barrel is less than 2/3 full, add some filler media (plastic pellets or porcelain shapes) as required. Run this stage for about a week or as needed.

## **Step 4 – Final Polish**

The final step is final polish. Rocks/barrel must be scrupulously clean and rocks sufficiently pre-polished for successful results. Polish may be done with Aluminium, Tin or Cerium Oxide polish. Load barrel with rocks/water and add filler media if required for optimal volume. Add 2 tablespoons of polish and run for about a week. Check after a couple of days to make sure polish is starting to come up.

## **Optional**

**Pre-Polish Stage** – If you are finding it difficult to achieve a good polish, the rocks MAY benefit from an interim pre-polish step (between steps 3 and 4). Use a fine abrasive such as #1200 or #1500 Silicon Carbide or Aluminium Oxide.

**Burnishing Stage** – some people run a short burnishing step after the final polish to improve lustre. To do this, after polishing run the rocks and associated filler media with warm water and 1.5 tablespoons of pure soap flakes or detergent powder. Run this step for just a short time (from 1 to 6 hours as required). Make sure the soap or detergent is as pure as possible (with minimal other additives).

### **Keys to Success**

- Clean everything extremely carefully – any stray particles of grit can cause scratching and prevent a good quality polish.
- Discard unsuitable rocks - ie anything with cracks or voids which can trap grit particles or may be too porous to polish well.
- Do not move rocks to next stage until they are ready.
- Check if rocks are ready to polish by manually applying some polish slurry to a sample rock using some old denim material – if you don't see a polish start to come up quickly, then rocks are not ready yet.
- If one type of polish is not giving a good result, sometimes trying a different polish and/or adding a pre-polish step can make all the difference.

## **Trouble Shooting**

### **The Barrel is not rotating**

Check that the belt tension is correct and that shafts are moving freely. If belt tension is too loose, barrels may stop turning. Use a suitable lubricant on shaft bearings. Also check that the tumbler is not overloaded – do not exceed 2kg total weight (weight of barrel and contents).

### **The Tumbler is very noisy**

If any unusual noise develops, stop the tumbler immediately and investigate the cause. In most cases, noisy running is caused by belt tension being too tight or in some cases, being extremely loose.

### Leaking Barrel

Ensure that the inner lip between the inner lid gasket and the barrel rim is free of any debris or grit (wipe dry and clean before installing lid). Do not over-tighten barrel nut. Make sure tumbled rocks are not “outgassing” and producing excess gas as they grind (indicated by a bulge in bottom of barrel) – release excess pressure if required.

### No Power

If there is no power at all going to the motor, check fuse and replace if necessary. **First unplug unit from power completely.** Remove fuse holder using a flat screwdriver to push in and turn quarter of a turn anticlockwise until release. Reverse procedure to replace fuse holder.

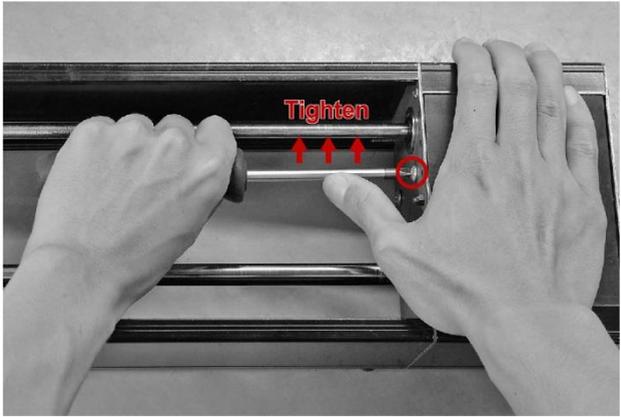
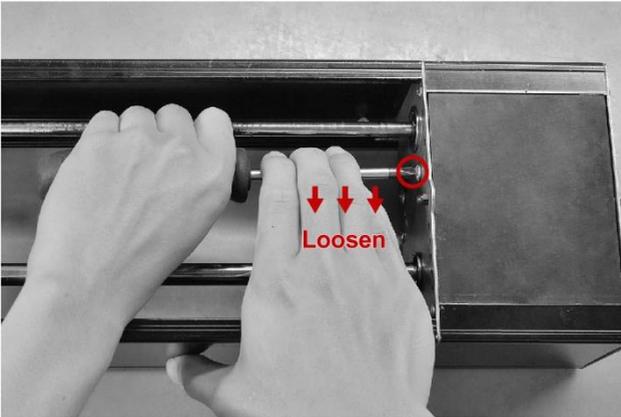
## Care and Maintenance

**Lubrication:** Applying a drop of light oil (as supplied) to the shaft bearings approx. every 3 to 6 months can help with machine disassembly in the future.

**Belt Tension:** Adjust belt tension if required by moving motor position with the adjustment screw as shown on next page. Tension should not be too tight as this puts excessive load on the motor and can increase noise. Keep tension just tight enough so that noise is minimised and the barrel is rotating effectively.

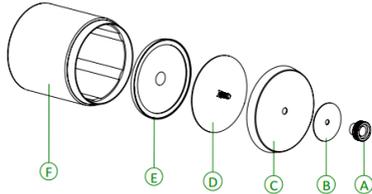


Adjust the belt tension by moving screw indicated in the previous photo. Loosen the motor pivot screw marked in green first to allow for easy adjustment.



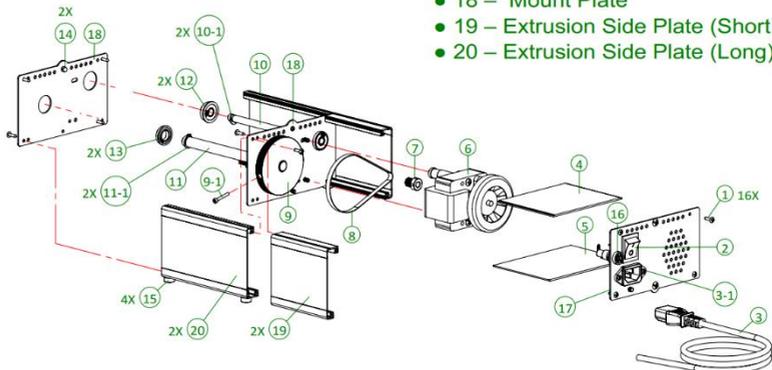
## Parts Diagram and List

- A – Barrel Nut
- B – Barrel Washer
- C – Outer Lid
- D – Inner Lid
- E – Lid Gasket
- F – Barrel

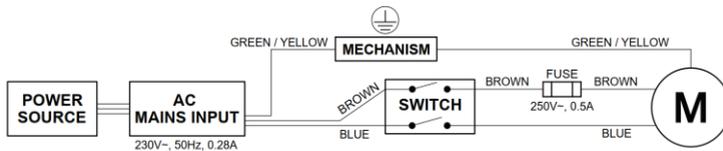


- 1 – Screws
- 2 – On/Off Switch
- 3 – Power Cord
- 3-1 – IEC Male Connector & Screw
- 4 – Motor Top Cover
- 5 – Motor Bottom Cover
- 6 – Motor Set 230V(with 7)
- 7 – Motor Pulley

- 8 – Belt
- 9 – Drive Pulley
- 9-1 – Screw
- 10 – Idler Shaft
- 10-1 – E-Clips Ring
- 11 – Drive Shaft
- 11-1 – Snap Ring
- 12 – Bearing (Small)
- 13 – Bearing (Large)
- 14 – Barrel Guide & Screw
- 15 – Feet
- 16 – Fuse Holder
- 16-1 – Fuse (0.5A)
- 17 – Power Switch Plate
- 18 – Mount Plate
- 19 – Extrusion Side Plate (Short)
- 20 – Extrusion Side Plate (Long)



**Wiring Diagram** – All wiring uses 18 AWG conductors.



## Further Information

### Using the Rotary Tumbler

This manual is a brief guide on rock tumbling only. Further information about tumbling is available at our website. For more about alternative applications (eg. metal polishing, creating “beach glass”, etc), see our website or contact us directly at [info@aussiesapphire.com.au](mailto:info@aussiesapphire.com.au)

## Jewellery Polishing Instructions

This tumbler is ideal for polishing small batches of jewellery. We recommend running 1 kilogram of stainless steel shot and a suitable burnishing compound in the barrel. Before first use, run the barrel with stainless steel shot and burnishing compound for about half an hour to clean the inside of the barrel thoroughly.

### **STEP 1:**

Open lid and add burnishing media (stainless shot is recommended). Add jewellery pieces to the barrel and enough water to just cover the top of the media and pieces. Add the recommended amount of burnishing compound. Close lid.

### **STEP 2:**

Turn on the tumbler and run for around 30 minutes. Check at this point to see if pieces need further polishing. If the water is getting very black

and murky, replace with clean water and fresh compound. Tumble for another 30 minutes and check again at that point. Do NOT run for too long without new water/compound.

**STEP 3:**

Once you are happy with the polish, empty barrel into a strainer and rinse with clean water. Remove jewellery pieces and dry off. Allow the shot to dry completely before storing.

**Suitable Burnishing Compounds** – we recommend MP103 burnishing compound or similar product for tumble polishing. A pure soap or very mild liquid detergent may also be used. Do NOT use products containing anti-bacterial additives or any other harsh chemicals as barrel damage may occur. Chemicals such as pickle, LOS, etc should be completely rinsed off and/or neutralised before tumble polishing.

**Stone-Set Jewellery** - take extra care when tumbling stone-set jewellery. Many pieces are fine to tumble but any heavily treated or porous gemstones should be avoided – ie. avoid tumbling stones such as opal doublets or triplets, pearls, composite turquoise, oiled emeralds or similar. Any pieces that may be susceptible to chipping or fracturing during the tumbling process should be avoided.

**Maintenance and Setup**



The troubleshooting section in this booklet is a brief guide only. Additional guidance is available on our setup and maintenance video available at our website and YouTube channel.

Scan the QR code to view our resource library for the Smooth 1 and 3.



## Warranty Information

The Auscut Smooth 1 Tumbler is covered by a 12 month warranty so you can be assured of the highest manufacturing quality.

- This warranty doesn't cover problems resulting from incorrect usage or failure to maintain the tumbler correctly.
- This warranty does not cover consumables such as drive belts or barrels unless caused by a manufacturing defect.
- This warranty covers the original purchaser of the equipment and is non-transferable.

If you require warranty assistance, please contact us  
[info@aussiesapphire.com.au](mailto:info@aussiesapphire.com.au)

## Model Number

Model: Auscut Smooth 1. AS-1.5-1. TB-1-220.

## Contact Us

For consumables, parts or technical advice, please contact us:

- Phone: 1800 502140
- Web: [www.AussieSapphire.com.au](http://www.AussieSapphire.com.au)
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