

Warranty Information

The Auscut Smooth 7 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 at info@aussiesapphire.com.au

Model

The Auscut Smooth 7 Tumbler (model AS-7)

Contact Us

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

- Address: 42 Glen Legh Road, Glen Innes NSW 2370
- Phone: 1800 502140
- Email: info@aussiesapphire.com.au
- Web: www.AussieSapphire.com.au



Auscut Smooth 7 Rotary Tumbler



User Guide



Table of Contents

Safety Advice	1
Getting Started.....	2
Operating Instructions.....	3-4
Troubleshooting / Care and Maintenance.....	5
Belt Tension Adjustment	6
Parts Diagram and List.....	7
Metal Polishing	8
Further Information	9
Tumbling Log.....	10
Warranty Information and Contact Us.....	11

Safety Advice

- Read this User Guide thoroughly before operating your tumbler.
- This tumbler is designed to operate in a well ventilated space at normal room temperature. Do not enclose or restrict air flow to the tumbler. It is normal for the housing to be warm to touch.
- Ensure that children use the tumbler under suitable adult supervision.
- Keep power cord away from heat, oil and sharp edges at all times. We recommend using an earth leakage power board for extra protection.
- Do not overload the tumbler. Use appropriate quantities that don't exceed the tumbler's capacity.
- Completely unplug the tumbler before doing any maintenance or when removing the motor cover.
- Never pour the grit slurry down the drain. The slurry hardens like cement and will clog your drain.

Tumbling Log

Material	Start Date	Abrasive	Media	Finish Date
Notes				
Notes				
Notes				
Notes				
Notes				
Notes				

Further Information

Using the Rotary Tumbler

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

Maintenance and Setup

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



Scan QR code to view our resource library for the Smooth 7 Tumbler.

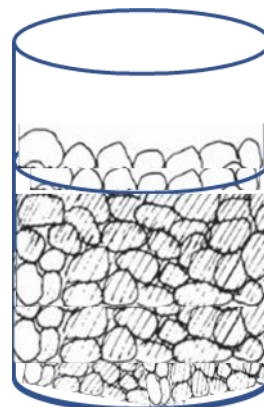
Getting Started

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).
- 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).
- 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.
- Operating speed: there are two speed options. We recommend using the standard speed (i) for most rock tumbling steps and the faster speed (II) for metal polishing.

Usage rate of grit/polish:

- Add approximately 10-15 tablespoons of silicon carbide grit for the grinding stages to the 7.5 kg barrel (half that for the smaller 3.5 kg barrel).
- Add approximately 8-12 tablespoons of polish (cerium, aluminium or tin oxide) for polishing stages to the 7.5 kg barrel (approx. half that for the smaller barrel).
- Add sufficient water to make a slurry – just up to the top layer of rocks.



The following page contain a sample Tumbling Log so you can record details of your tumbling. The basic process is simple but it does require some trial and error to fine tune your results with different types of material. Keeping a log helps to keep track of progress and helps to improve quality.

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 to 5 tablespoons of #80 Silicon Carbide grit per kilo of rock. 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 to 5 tablespoons of #220 silicon carbide grit per kilo of rock. 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 to 5 tablespoons of #600 Silicon Carbide grit per kg of rock. 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.

Metal Polishing

For polishing metal items, we recommend using stainless steel media and a suitable burnishing compound. The following instructions are relevant for reloaders polishing rifle brass but are applicable to any metal items.

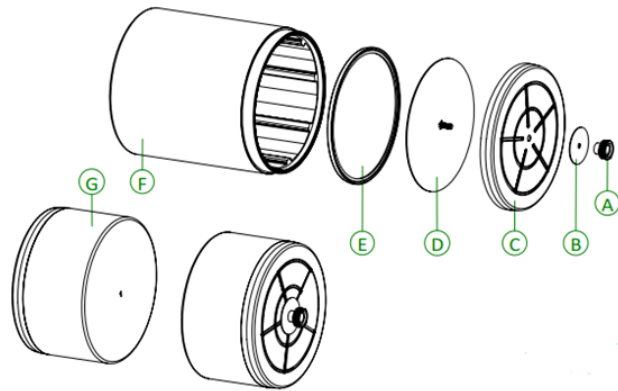
Generally you will run about 1.5 times as much stainless media (in kilograms) as brass so if you are cleaning 1 kg of brass, plan to tumble this with 1.5 to 2 kg of stainless pins. The pins are heavier of course so they will not take up as much room as the brass inside the tumbler barrel. Aim to fill the barrel with brass/media about half to 2/3 full - add water up to the level of the media and the recommended amount of burnishing compound. Feel free to experiment with these proportions - it is just a guide to get you started.

It is important not to tumble for too long - as the brass is cleaned, tarnish and residue from inside the base will be held in suspension in the water. If you tumble for too long, the water can be overloaded and start to redeposit back onto the brass so you need to refresh the water before that point. Generally you will be happy with the brass well before that point. However, we do recommend checking every half hour or so for the first few batches until you get a feel for how long it will take - usually only an hour or two. Do NOT run the tumbler overnight as this risks overdoing it.

We recommend MP103 burnishing compound which is designed specifically for tumble polishing metals such as brass - it is a specialised powdered soap which is used at the rate of approximately 20 grams per litre of water.

Once you have finished tumbling, empty out the barrel and rinse everything thoroughly, separate the cases from the pins using a separator or sieve and dry the brass completely. When storing your stainless pins, either store them in a jar or the barrel under water or dry them completely. The pins are made from 304 Stainless Steel and so are extremely rust resistant but they CAN rust if stored damp in an enclosed container. If you are using them again soon, it is usually fine to just leave them in an OPEN barrel or jar ready to use.

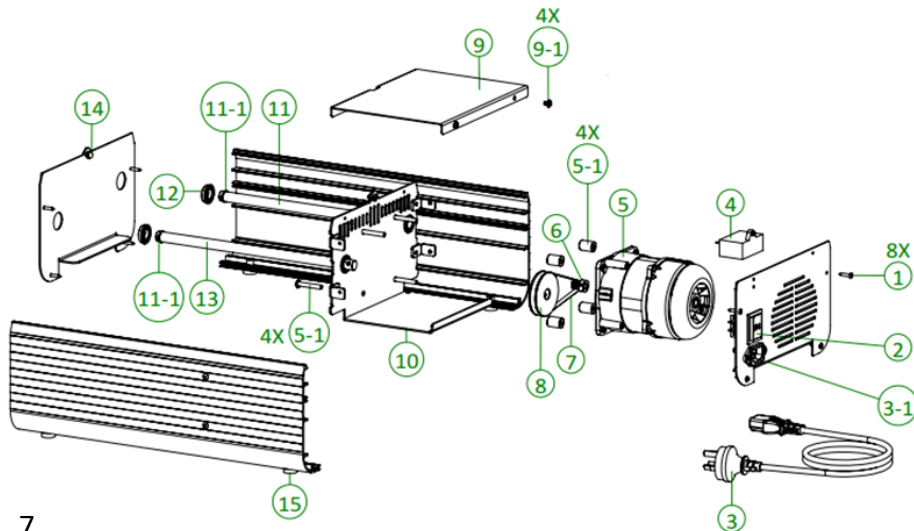
Parts List



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

- 1 – Screw
- 2 – On/Off Switch
- 3 – Power Cord
- 3-1 – IEC Male Connector & Screw
- 4 – Capacitor & Screw
- 5 – Motor
- 5-1 – Motor Support Set
- 6 – Timing Pulley

- 7 – Belt
- 8 – Drive Pulley
- 9 – Motor Top Cover
- 9-1 – Screw
- 10 – Motor Bottom Cover
- 11 – Idler Shaft
- 11-1 – Snap Ring
- 12 – Bearing
- 13 – Drive Shaft
- 14 – Barrel Guide & Screw
- 15 – Mounting Feet



7

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 w to 4 tablespoons of polish per kilogram of rock 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 Aluminum.

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 4-5 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 another 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. Do not use thick grease or heavy oil on shaft bearings. Also check that the tumbler is not overloaded – do not exceed 8kg total weight (weight of the barrel(s) and all 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 too 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). Nut should be finger tight but do not over-tighten. 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.

Care and Maintenance

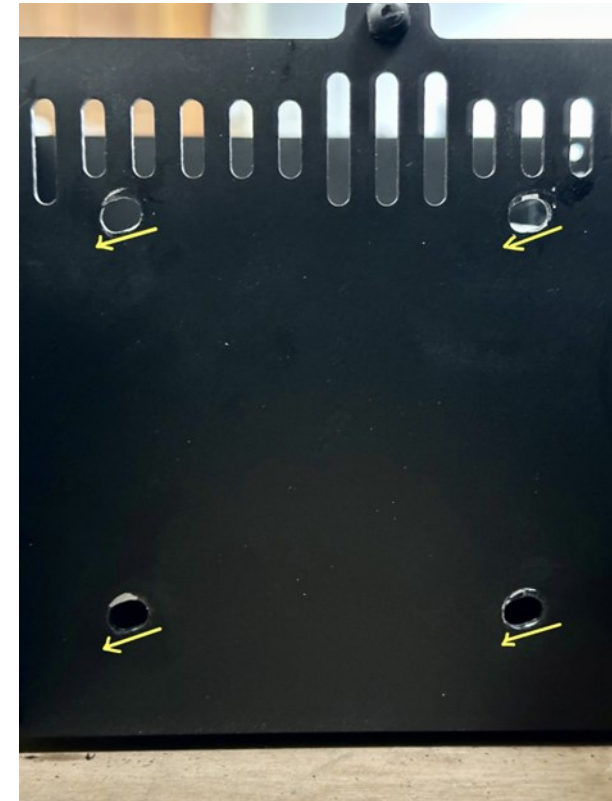
Lubrication

Lubrication is not required but a drop of light oil to the shaft bearings approx every 3 to 6 months can help with future machine disassembly.

Belt Tension

Adjust belt tension if required by moving motor position with the mounting screws 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.

The four mounting screws for the motor have sloped elongated holes. When adjusting the belt tension, simply loosen the four screws and the motor will slide down the slope and tighten the belt.



Operating Speed



There are two operating speed available on the On/Off switch. The standard speed (I) is recommended for most rock tumbling steps. You may optionally choose to use the faster speed (II) for the coarse grinding step but going too fast in subsequent steps can cause damage and make it difficult to polish. The faster speed (II) is recommended for metal polishing or deburring.