

## Warranty Information

The AS-1.5-2 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](mailto:info@aussiesapphire.com.au)

## 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](mailto:info@aussiesapphire.com.au)
- Web: [www.AussieSapphire.com.au](http://www.AussieSapphire.com.au)



# USER GUIDE

## Rotary Tumbler

### AS-1.5-2



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## 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 if children use the tumbler, it is 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.

## 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 3kg total weight (weight of two barrels 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.

### 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.

## Care and Maintenance

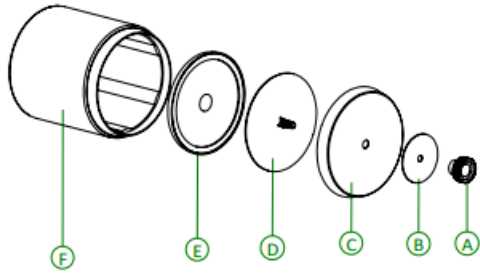
### Lubrication

Applying a drop of light oil to the shaft bearings approximately every 6 months can help with machine disassembly in the future.

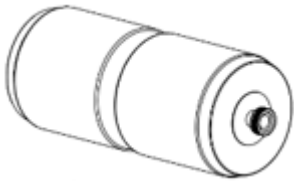
### Belt Tension

Adjust tension by moving motor position with the adjustment screw shown on the diagram at left. 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 minimal and the barrel is rotating effectively.

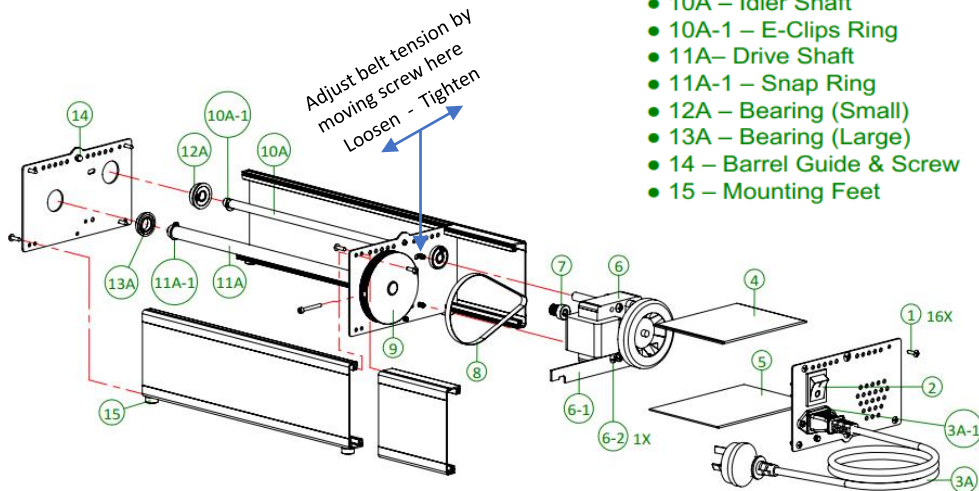
## Parts Diagram and List



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



- 1 – Screw
- 2 – On/Off Switch
- 3A – Power Cord
- 3A-1 – IEC Male Connector
- 4 – Motor Top Cover
- 5 – Motor Bottom Cover
- 6 – Motor
- 6-1 – Motor Support Bracket
- 6-2 – Screw
- 7 – Timing Pulley
- 8 – Belt
- 9 – Drive Pulley
- 10A – Idler Shaft
- 10A-1 – E-Clips Ring
- 11A – Drive Shaft
- 11A-1 – Snap Ring
- 12A – Bearing (Small)
- 13A – Bearing (Large)
- 14 – Barrel Guide & Screw
- 15 – Mounting Feet

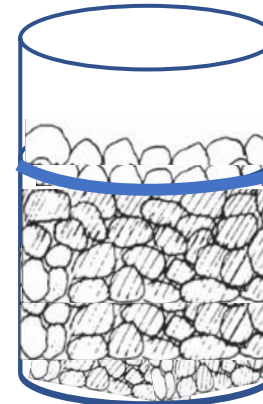


## Getting Started

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 rate 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 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).

## 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)

### Maintenance and Setup

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