Peppermills FOR AFRICA

WOODWORKER RESOURCES · PRETORIA · EST. 2005

The CrushGrind® “Baby” 100 mm shaft, *my way.*

The mechanism of choice for all your smaller pieces of wood that are too beautiful to throw away. A step-by-step guide to turning miniature pepper, salt and spice mills — by Piet Smith, distributor for Africa.

GUIDE
Miniature mills & fitting

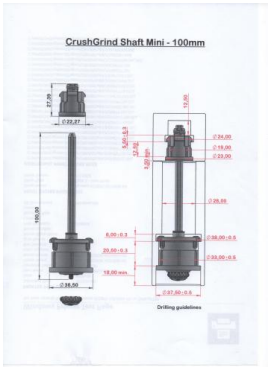
SKILL LEVEL
Intermediate turner

CONTACT
082 456 8372 · peppermills.co.za

THE END TARGET

Little mills from *leftover treasures.*

The Baby 100 mm shaft mechanism turns small offcuts into finished mills of around 90 to 120 mm high. The mechanism sells at **R160** — and you get one free for every ten ordered.



TOOLS NEEDED

- 25 mm drill
- 19 mm (¾″) drill
- MillDrill — see step 04
- Recess cutting tool — see step 05
- Helpful shop-made jigs — see the last page

MILLDRILL SETTINGS FOR THE BABY

Set the **front cutter** to cut a diameter of 33 mm and the **back cutter** to 39 mm — each cutting point must protrude 4 mm.

Practice these sensitive settings on sample wood first, to make sure your mechanism fits perfectly.

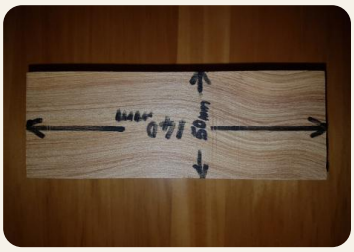
THE PROCESS

Turning the Baby, *step by step.*

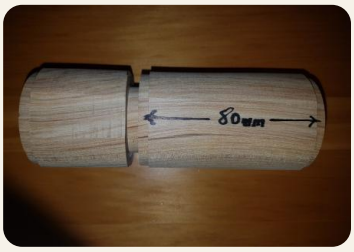
Work through the steps in order. Dimensions assume the CrushGrind® Baby 100 mm shaft mechanism.

01

Start with the blank

Cut a blank to the recommended (smallest) size, mount it, and turn it down to a cylinder.

02

Mark out and cut the spigots

- Cut 5 mm spigots on both ends of the blank to fit your chuck.
- Measure and mark 80 mm from the bottom spigot (excluding the tenon).
- Mark 10 mm more beyond the 80 mm mark and cut two spigots of 5 mm each side: the one on the Body side the same as the bottom spigot, the other not smaller than 33 mm in diameter.

03

Part the Top from the Body

Saw the Top from the Body on the band saw, keeping the spigots intact on both pieces.

04

Drill the Body

- Chuck the Body and drill right through with the 25 mm drill.
- Follow the 25 mm hole with the MillDrill up to the mark.

> The MillDrill is available from us at **R990** — it cuts both diameters the mechanism needs in one pass.

05

Cut the recess for the clips

Use a shop-made recess cutting tool to cut the recess inside for the clips of the mechanism.

> The recess cutting tool is available from us at **R590**.

06

Reverse and clean up

Reverse and chuck the Body on the lathe. Remove the spigot from the top part of the Body and clean up to show the 25 mm hole.

07

Open the spice reservoir

Use the MillDrill to enlarge the 25 mm hole for the spice reservoir. Drill to the position where the front cutter meets the bottom cavity previously cut.

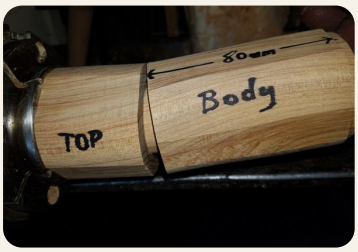
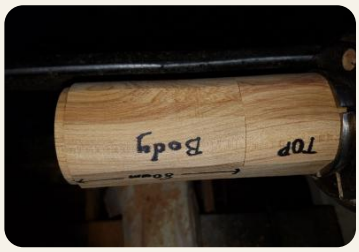
08

Drill the Top

- Drill a 19 mm (¾″) hole, more than 25 mm deep, into the Top.
- Use the recess cutting tool to cut the recess for the clips of the driver to fit in.

09

Fit the Top to the Body

Turn the spigot of the top part smaller until it fits snugly inside the top opening of the Body.

10

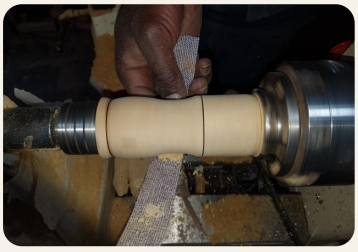
Line up and design

- Line up the Top and bottom to start designing. Remove the bottom spigot, using a revolving centre in the tailstock that fits inside the Body.
- Design to your heart's delight!

11

Sand and seal

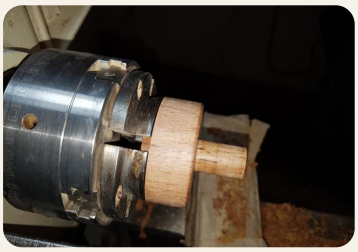
- Sand through all the grits, from 80 to 400.
- Apply three layers of a 50/50 mix of sanding sealer and thinners — wipe on only when the lathe is stationary.



12

Finish the Top on a jam chuck

Make a jam chuck to fit the 19 mm (¾") hole of the Top. Mount the Top on the jam chuck, support it with the live centre, and finish the shape. Sand and finish with the sanding sealer mix.



13

Fit the mechanism

- Tap the mechanism into position with a shop-made tap tool and stem guide — see the jigs on the next page.
- Tap the driver into position with a mallet.

14

Buff to a finish

Buff the wood with a mixture of carnauba and beeswax.

> Blocks of our wax mix are available at **R100**.

VOILÀ!

Ready for *the market.*

A finished miniature mill from a piece of wood that was too beautiful to throw away — fitted with the same guaranteed CrushGrind® ceramic as its bigger brothers.

THE WORKSHOP EXTRAS

Handy and helpful *shop-made jigs.*

Three simple jigs, each turned in the workshop, make fitting the Baby mechanism quick and repeatable.

Tap tool

Used to tap the mechanism into place with a mallet. Keep the diameter under 39 mm so it fits loosely into the Body — the rim must just touch the plastic sides of the mechanism.

Jam chuck

A tight-fitting chuck for finishing the Top, as used in step 12. Turn it to grip the 19 mm (¾″) hole firmly while you shape, sand and seal.

Stem guide

Drill a small hole right through to guide the stem, helping you seat the mechanism square. Don’t make this tool too short, or the stem will hit the table before the mechanism seats. *(Been there, done it!)*

> Practice the fit on sample wood before committing your best offcut — the Baby’s tolerances are tighter than the full-size mechanism’s.

THE WAY FORWARD

Too beautiful to throw away.

Every offcut on your shelf is a mill waiting to happen. Don’t redesign the wheel: I am a phone call away.

PEPPER MILLS 101

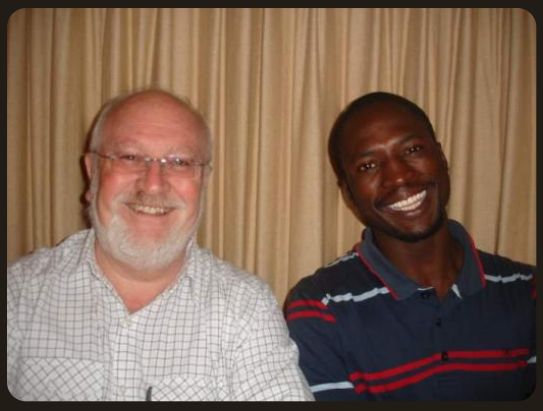
Saturday morning course — R490

A two-hour, hands-on course covering this whole process, run as the need arises. Includes a take-home CrushGrind® mechanism worth R180.

BULK DISCOUNT

Buy 10, get 1 free

Baby mechanisms sell at R160 each. On every ten mechanisms you order, you receive one free of charge.



THANK YOU

Piet and Charlie

Tel & WhatsApp 082 456 8372 (+27 82 456 8372)
info@peppermills.co.za · www.peppermills.co.za
Pretoria, South Africa — ships nationwide and abroad.

Disclaimer: while all care is taken to ensure the correctness of prices in this document, price changes might have occurred. Please refer to our website for the latest information. Thank you. © 2005–2025 Pepper Mills For Africa.