Peppermills FOR AFRICA

WOODWORKER RESOURCES · PRETORIA · EST. 2005

Fitting the CrushGrind® ceramic mechanism, *my way.*

A step-by-step workshop guide to turning your own pepper, salt and spice mill and fitting the award-winning CrushGrind® mechanism — by Piet Smith, distributor for Africa.

GUIDE
Mill making & fitting

SKILL LEVEL
Intermediate turner

CONTACT
082 456 8372 · peppermills.co.za

BEFORE YOU START

Safety first — *workshop rules.*

A few house rules from Piet's workshop. Break one and you owe the tea tin ten rand.

- Pray before you start
- No gloves on the band saw — R10 fine
- No dust mask at the lathe — R10 fine
- No eye protection — R10 fine
- Tools left in the chuck — R10 fine

> *"If the axe is dull and its edge unsharpened, more strength is needed, but skill will bring success."*
>
> ECCLESIASTES 10:10

THE END TARGET

One mill, two parts, one mechanism.

You'll turn a **Top** and a **Body**, then fit the CrushGrind® ceramic mechanism inside. The ceramic mill carries a 25-year international warranty backed by CrushGrind® Denmark.

MECHANISM PRICING

260 mm shaft	**R200**
195 mm shaft	**R190**
135 mm shaft	**R180**
Bottom fit	**R160**

Buy 10 mechanisms and receive one free of charge.

THE PROCESS

Turning the blank, *step by step.*

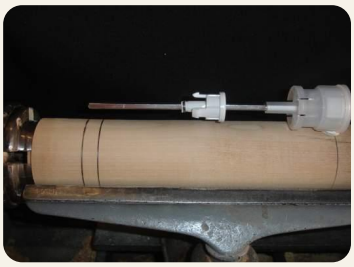
Work through the steps in order. Dimensions assume the standard CrushGrind® wood mechanism.

01 Prepare your blank

Turn your blank down to the length of the mechanism you have in mind. Cut spigots on both ends to fit your chuck.

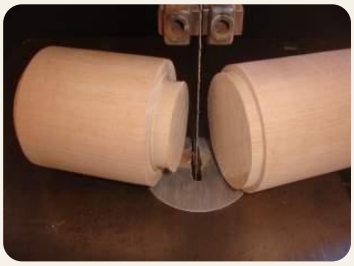
02 Lay out the mechanism

- Place the mechanism on top of the blank.
- Allow 20 mm from the bottom (ignoring the spigot).
- Mark off the seat for the shaft driver 10 mm from the top of the shaft.



03 Part the Top from the Body

- With a parting tool, cut a tenon (>38 mm) on the Body side of the inner mark — 10 mm wide.
- Cut a spigot to fit your chuck — 5 mm wide.
- Saw off the Top with the band saw, cutting close to the Top so it retains its spigot.



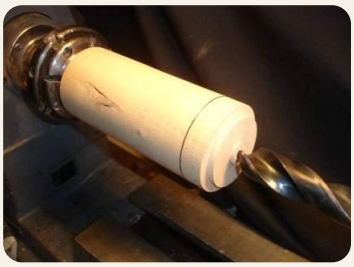
04

Drill the Body — the MillDrill way

Drill a 25 mm hole through the Body, working from both sides.

- Use the MillDrill, which cuts the needed 38 mm and 45 mm in one pass.
- Drill up to your mark (ignoring the spigot) to assure a perfect fitting.
- Use the MillDrill on the other side (top of Body) to drill a 38 mm hole, 30 mm deep.

> The MillDrill is available from us at **R990** — reviewed in *Woodturning* magazine as a well-made, efficient tool for anyone fitting CrushGrind® mills regularly.



alt

Or: drill with Forstner or spade bits

Start with the biggest bit first.

- Drill 20 mm deep into the Body (ignoring the spigot) with a 45 mm drill.
- Drill a further 40 mm+ into the Body with a 38 mm drill.
- Drill through the Body with a 25 mm drill but stop 30 mm before breaking through, then come back with a 38 mm drill from the top side of the Body, 30 mm deep or until you meet the 25 mm hole. After 30 mm, proceed with the 25 mm drill until the holes meet.

05

Cut the recess in the Body

Use a shop-made recess cutting tool to cut a recess for the mechanism clips. Alternatively, use epoxy to glue the mechanism in at final assembly.

06

Drill the Top

- Clear up the bottom of the Top.
- Turn the tenon down to <38 mm to fit into the Body — test the fit against the Body as you go.
- Drill a 22 mm hole, 40 mm into the Top.

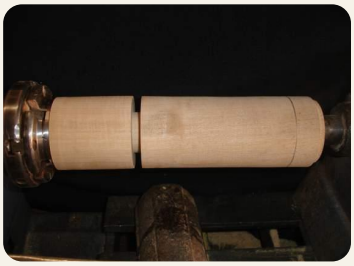
Then cut a recess for the driver's clips with the recess cutting tool — or plan to epoxy the driver in.

07

Turn and design your mill

- Turn off the top spigot from the Body.
- Press the Top and Body tightly together with a tailstock cone that fits inside.
- Shape, sand and finish your mill, removing the bottom spigot.

This is where the mill becomes yours — sleeper, classic, Fibonacci, round head or rough. No two pieces of wood are the same.



08

Finish the Top

- Make a jam chuck to hold the Top, with support from the tailstock.
- Turn off the excess material, then design, sand and finish the Top.

09

Final finish and buffing, my way

- Apply three layers of a 50/50 mix of sanding sealer and thinners.
- Buff with a carnauba and beeswax mix.

10

Fit the mechanism

- Tap the shaft driver into the 22 mm hole in the Top — held by the groove or epoxy.
- Tap the ceramic mill into the Body using a shop-made centering tool and tap tool — groove or epoxy.

VOILÀ!

Ready for *the market.*

A hand-turned mill, fitted with a ceramic mechanism tested to the equivalent of 400 years of domestic use — and guaranteed for 25 of them.

THE FINAL SAY

“Every man kisses his wife in his own way.”

You may find many easier ways — do it! This is my way, more than 6 000 fittings later, and I’m still learning. Don’t redesign the wheel: I am a phone call away.

PEPPER MILLS 101

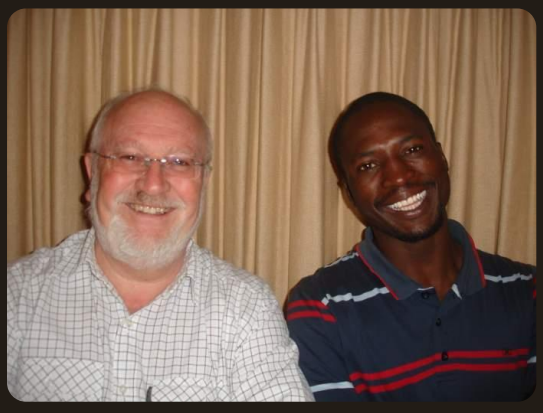
Saturday morning course — R500

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

BULK DISCOUNT

Buy 10, get 1 free

On every ten mechanisms you order, you receive one free of charge. Free step-by-step guides with every order.



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.