Peppermills FOR AFRICA

WOODWORKER RESOURCES · PRETORIA · EST. 2005

Turning the Barista CrushGrind® coffee grinder, *my way.*

A step-by-step workshop guide to turning your own coffee grinder and fitting the CrushGrind® Barista ceramic mechanism — milling gourmet coffee for the connoisseur. By Piet Smith, distributor for Africa.

GUIDE
Coffee grinder & fitting

SKILL LEVEL
Intermediate turner

CONTACT
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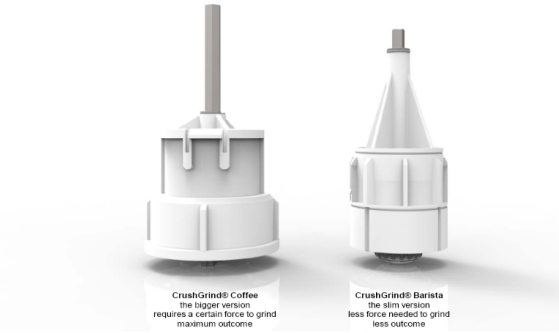
WHY GRIND YOUR OWN

The authentic flavour *of coffee.*

Coffee's flavour and freshness live in the essential oils of the unground bean. Grinding releases them — and roughly half of the bean's ~800 flavour compounds evaporate within 30 minutes of grinding. So grind just before you brew: more flavour, fresher flavour.

WHY CRUSHGRIND® CERAMIC

- Hi-tech ceramic transfers no metal taste to the coffee.
- 2–5× more efficient than other market products.
- Precise coarseness adjustment — Turkish to French press.
- Low thermal expansion for a uniform, never-bitter grind.
- Dismantles for a thorough clean.



ROTATIONS NEEDED PER 7 G CUP

MECHANISM	PRESS	FILTER	ESPRESSO	TURKISH
CrushGrind® Coffee	18	22	28	39
CrushGrind® Barista	**23**	**30**	**40**	**58**
Market product A	36	58	100	350
Market product B	35	49	74	156
Market product C	39	62	90	108

7 g is the average amount for one cup. The matrix shows full 360° rotations needed at various settings; most people grind at 60–100 rpm. The Barista is the slim version — less force needed per turn.

SAFETY FIRST

Always work between centres and observe all safety rules. If your lathe starts to shudder, dive for cover — switch off later. *(Slaan dekking!)*

The face shield that earned its keep — shown with the approval of Frans Gericke.

THE PROCESS

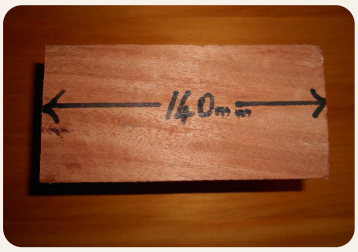
Turning the grinder, *step by step.*

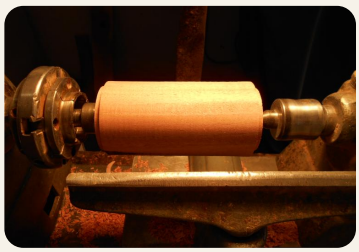
Work through the steps in order. Dimensions assume the CrushGrind® Barista mechanism.

01

Start with the blank

Cut a hardwood blank of 140 × 80 × 80 mm, then turn tenons on both sides to fit your chuck.

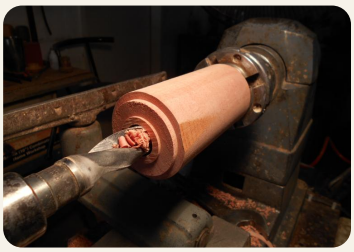




02

Drill right through

Drill a 25 mm hole right through the blank — turn it around in the chuck if needed.



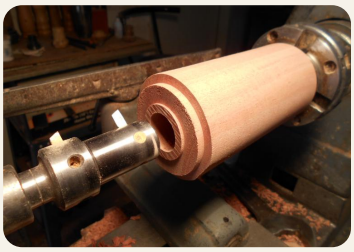
03

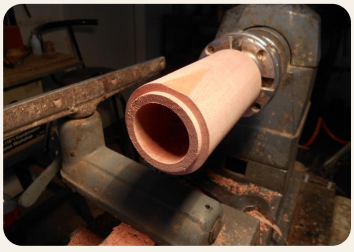
Widen to 46 mm

Use your MillDrill, extended to 46 mm, to drill to maximum depth. If you don't have one, widen the hole to 46 mm with a skew.

Done! Test with the mechanism — it should fit loosely at this stage.

> Good news for MillDrill owners: the 46 mm Barista extension is available from us at **R690**.

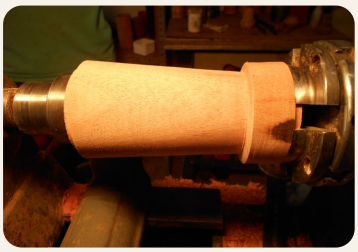


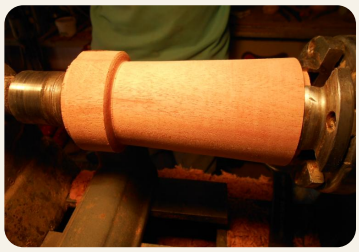


04

Design your “coffee pot”

- Steady the tailstock in preparation for design.
- Turn a design of your choice — the “coffee pot” style shown here.
- Turn the piece around and remove the tenon that is no longer needed — carefully.

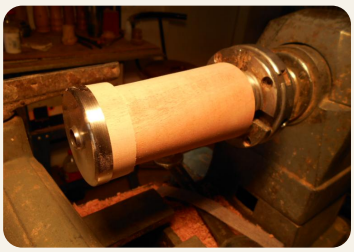


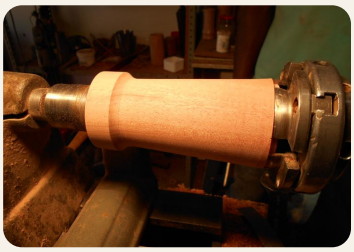


05

Fit the top

- Start fitting the top at >65 mm.
- Work down until it’s fitted snugly — but easy enough for a lady to remove.
- Finish the “coffee pot” design.

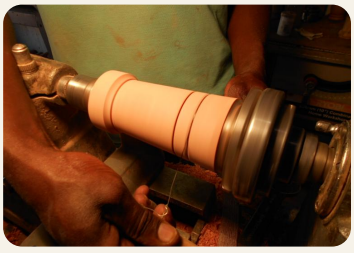




06

Lay out and burn the grooves

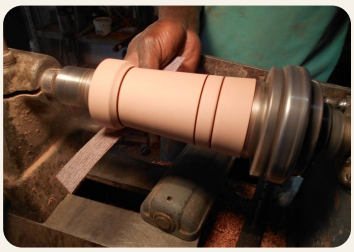
- Lay out the mechanism so the top just protrudes.
- Mark the middle of the bottom section of the mechanism, where the ceramic frame is — you’ll need this line later for the locking pin.
- Mark the design grooves, then burn them in with wire.

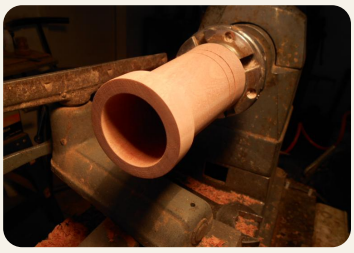


07

Sand and open up the bore

- Sand from 100 to 400 grit (Abranet). Be careful not to over-sand the area where the cap fits!
- Use the MillDrill to drill 46 mm right through the grinder — or use a skew if you don't have one.
- Done — sand the inside as well.





08

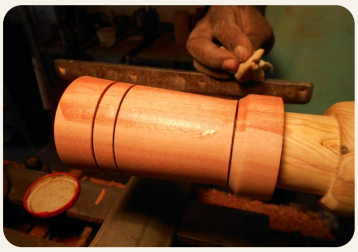
Jam chuck and clean up

- Make a shop-made jam chuck — a 46 mm tight fit.
- Stabilise with the revolving tailstock and remove the tenon carefully.
- Stabilise with a "dummy" revolving tailstock inside, then sand the sharp edge kind to a lady's fingers.

09

Seal, inside and out

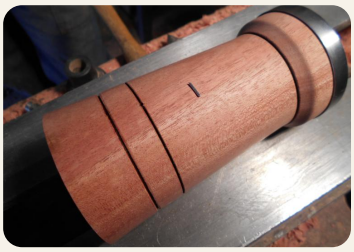
Apply three layers of a 50/50 mix of sanding sealer and thinners — do not spin it on! Apply the same mix inside.



10

Fit and lock the mechanism

- Push the mechanism in until it protrudes slightly, so the lid fits precisely over the protruding stem.
- Drill a small hole on the line you marked earlier, until the drill just touches the ceramic.
- Press a pin into the hole to lock the mechanism from moving — both sides if you wish.
- Jam-chuck the piece between both sides and re-burn the grooves to hide the pin hole(s).



11

Buff to a finish

Lightly touch a carnauba and beeswax mix onto the polishing buff, then buff the grinder to its final shine.

VOILÀ!

Ready for *the market.*

A hand-turned gourmet coffee grinder that sells at about R890 to R990 — with the mechanism, handle and lid costing R490.

THE FINAL SAY

Milling gourmet coffee for the connoisseur.

You may find many easier ways — do it! This is my way. Don’t redesign the wheel: I am a phone call away.

BARISTA KIT

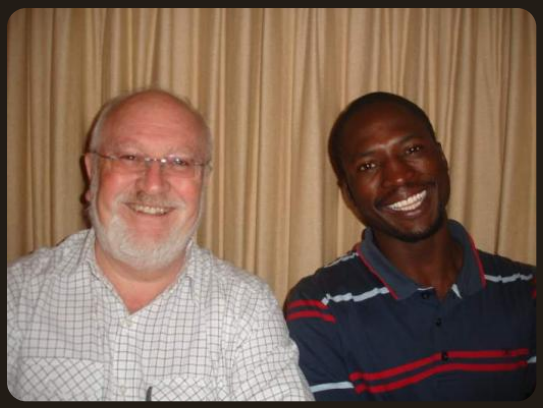
Mechanism, handle & lid — R490

Everything you need to fit one grinder. Finished grinders sell at about R890 to R990. On every ten mechanisms you order, you receive one free of charge.

MILLDRILL OWNERS

46 mm Barista extension — R690

Extends your existing MillDrill to the 46 mm bore the Barista mechanism needs — one clean pass to maximum depth.



THANK YOU

Piet and Charlie

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Pretoria, South Africa — ships nationwide and abroad.

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