Woodcut®
TOOLS LIMITED

USER GUIDE

Tru-Grind Original

SHARPENING SYSTEM

Tru-Grind Support Video available at www.woodcut-tools.com in the User Guides Tab.

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for turners
BY TURNERS

ABOUT WOODCUT TOOLS

Established in 1990, Woodcut Tools is a family owned manufacturer of innovative, high quality tools for wood turners based in Hawkes Bay, New Zealand.
Attention to detail, hard work and an absolute commitment to quality are the hallmarks of our business. Our products are designed by turners for turners. Driven by tradition while pushing the boundaries with innovative products.
To view our complete product range please visit woodcut-tools.com, or scan QR code to take you there.

PRODUCT BACKGROUND

Woodcut Tool's founder Ken Port wanted to make sharpening more simple, accurate and repeatable.

In the late 1990's Ken collaborated with Jerry Glaser from the USA to design the Woodcut Tru-Grind. Ken and Jerry recognised that many turners have various physical constraints and therefore wanted to make the sharpening process simple.

Core to their design is the ability to simply set the jig to a number, with accurate repeatability, the versatility of a single jig to hold any woodturning tool without the need of an adaptor and the compact design of the system

BOX CONTENTS

1. Tru-Grind Tool Holder
2. Original Base Slide
3. Set of screws
4. Tru-Grind Repeatability Chart
5. Small magnet for cleaning grinding dust from base slide

SETTING UP YOUR TRU-GRIND

1. Prepare to set up the unit either on a wooden base or direct to your workbench. You will need a screwdriver, square, pencil and ruler.

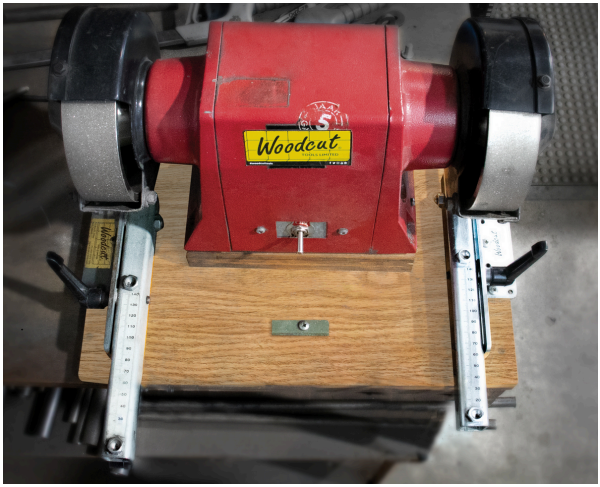
2. It is important that your grinder is at a comfortable height. We recommend the centre of the grinding wheel to be approximately the same height as your lathe spindle.

3. Mount your grinder securely on a flat bench or table. It is best if the height from the bench, and thus the foot of the baseslide, and the centre of the wheel to be 150 to 160mm (6-6½ inches).

4. Set your Tru-Grind base unit below the grinding wheel. Align the pivot points as close as possible to the center line of the grinding wheel. For 6" (150mm) wheels align the rear edge of the Tru-Grind Original base plate with the centre line of the grinder. For 8" (200mm) grinders bring the base plate forward to about ¾" (20mm) from the centre line of the grinder. Once you have achieved this, mark and drill the holes for the Base-slide and affix the screws firmly.

5. If you would like to have continuing use of a simple tool rest at the grinder then you can add a Tru-Grind Original Sturdy Rest to your Tru-Grind Original Base Slide.

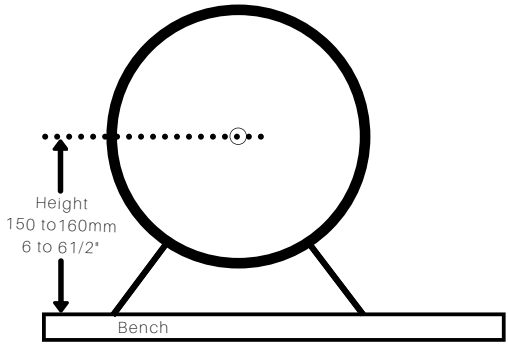
6. Add a stopper of hard wood along part of the front edge of the base board or your bench 50mm (2") back from the edge of the base board or bench. This is for consistently setting the same tool protrusion from the Tru-Grind Tool holder.



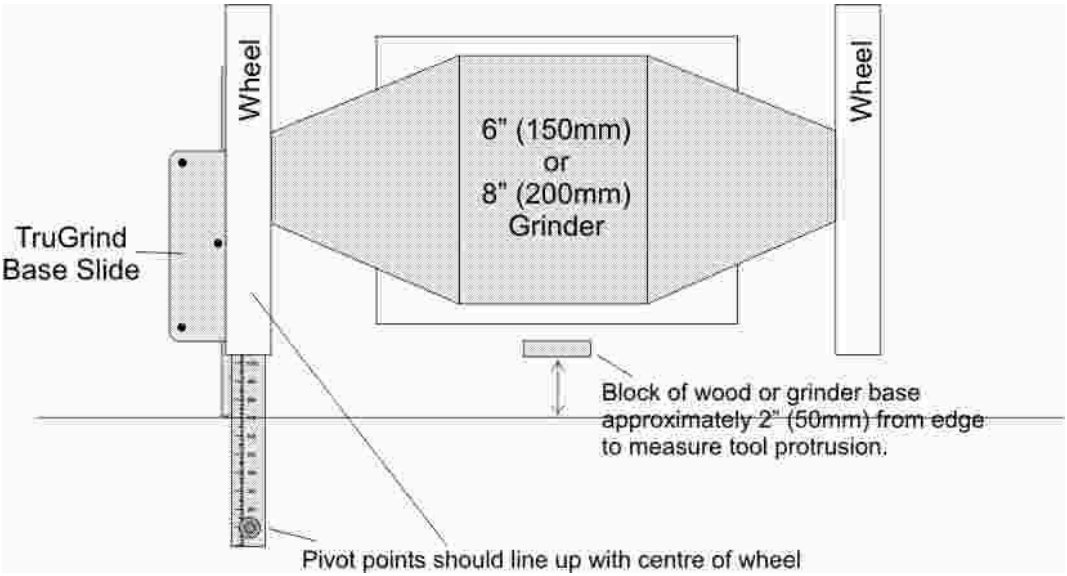
TRU-GRIND HEIGHT

Height from the bench to the centre of wheel should be 150 - 160mm (6-6½") for both 150mm (6") and 200mm (8") grinders.

It may be necessary to place a packer under the mounting base of the grinder or under the Tru-Grind Original Base-slide to get the height correct.



TRU-GRIND LAYOUT



Set up the Tru-Grind and grinder on your bench as above with centre of the pivot points aligned with the centre line of the wheel.

STOPPER FOR CHISEL PROTRUSION

Fix a stopper of hard wood along part of the front edge of the base board or your bench. This is 50mm (2") back from the edge of the base board or bench. This stopper will be chipped away with repeated use so make it easy to replace.

SHARPENING GUIDELINES

Scan QR Code for Tru-Grind Sharpening, this video include the Premium Base Slide and Sturdy Rest however sharpening and set-up of the tool holder is the same.

Grinding grit can damage your eyesight. Make sure you are wearing approved safety glasses before starting your grinder.

Basic steps with Tru-Grind sharpening
These are the basic adjustments to be made when sharpening all woodturning tools with the Tru-Grind jig:

1. **Tool Protrusion.** As above, screw a block to your bench, approximately 2 inches (50mm) from the edge, which you use to set the protrusion of the chisel end from the Tru-Grind Toolholder. This setting must be consistent every time you grind the tool.

2. **The position of the Toolholder Pivot Leg** determines the style of grind. Use position 1 for grinding standard traditional bowl gouges and roughing gouges. This will give a bevel angle which is similar on the sides and on the nose. The greater angle that you adjust the Pivot Leg to the Toolholder head (or the greater the number), the more will be the difference in bevel angle between the nose and the sides of the tool, and the further back you will grind the sides of the gouge, i.e. increasing the length of the fingernail.
You may need to find the closest setting notch to the previous angle and re-grind your gouge so that this setting can be used for future re-grinds.
Position 9, with the Pivot Leg pushed all the way forward, is used for grinding scrapers and ring tools.

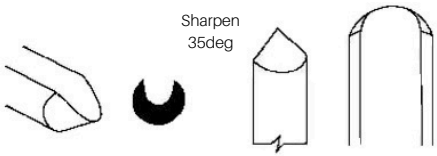
SHARPENING GUIDELINES

3. **Adjust the Base-slide.** After steps 1 and 2 above are set, you must adjust the Base-slide in or out to get the desired angle of your bevel, particularly on the nose of the chisel. 4. Record the setting. For each chisel write down, or record in some other way, the angle setting of the Toolholder and extension of the Base-slide.

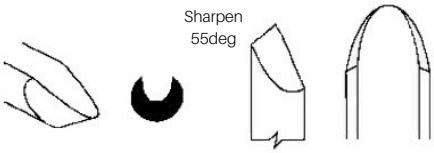
4.**Aids to Sharpening**. The Woodcut CBN Wheel product is recommended for sharpening. Unlike regular grinding wheels that will wear, the CBN product will retain size and shape. This means you won't need change the distance between the CBN product and the pivot point on the Base-slide.

SUGGESTED SHARPENING ANGLES

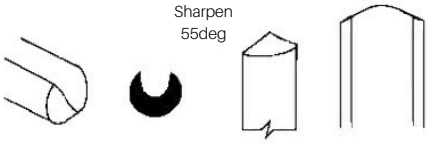
Traditional bowl gouge. Used on its side with the flute facing in the direction of the cut. With the bevel rubbing for a smooth finish even on end grain. Usually 10 to 15mm wide.



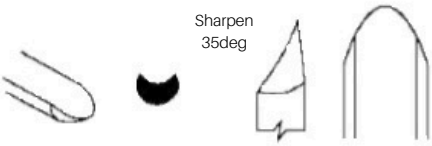
Fingernail or Celtic Grind bowl gouge. Used on its side with the flute facing in the direction of the cut. With the bevel rubbing for a smooth finish even on end grain. Usually 10 to 15mm wide.



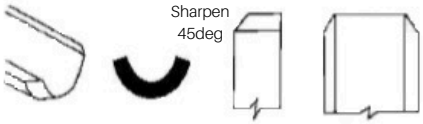
Bowl bottom gouge. Used on its side with the flute facing in the direction of the cut. Intended for use in the bottom of bowls. Usually 10 to 15mm wide.



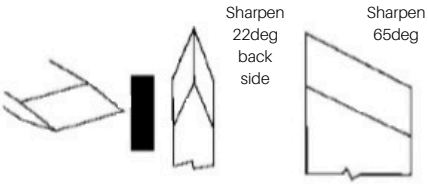
SUGGESTED SHARPENING ANGLES



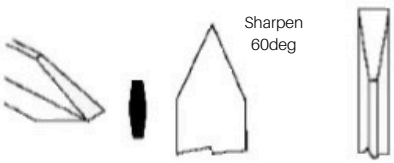
Spindle or Detail gouge. The main shaping tools of the spindle turner. Used for detail work, beads, coves, and ogees, to which the modern round shape is particularly suited. 5 to 15mm wide.



Spindle Roughing gouge. An essential tool for between-centre work (spindle turning). This tool quickly reduces square timber to the round. Also ideal for long, shallow curves. Usually 25mm wide.



Skew Chisel. The skew will produce the finest possible finish when used correctly. For cleaning end grain, pommels, rolling beads, etc. when both long point and heel can be used. 15 - 50mm wide.



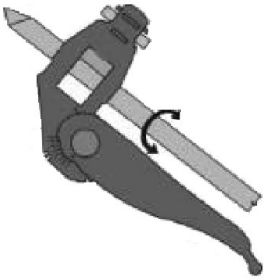
Diamond parting tool. An excellent all round parting tool. The double taper provides clearance along the sides of the tool to prevent excess binding while cutting.

STANDARD TRADITIONAL BOWL GOUGE

1. Fit the bowl gouge into the Toolholder. Tighten it down so it is firm and straight. We recommend approximately 2 inches or 50mm of tool protruding from the front of the Toolholder body. This protrusion must be the same each time you grind.

2. Next adjust the pivot leg until it is parallel with the handle of the bowl gouge (position #1 on the Toolholder). Fit the pivot ball at the bottom of the leg into the rear pivot point on the base slide. Move the Base-slide in or out until the correct bevel angle is achieved. We set the bevel angle of our traditional gouges at 35 degrees. This angle can be checked with a Woodcut Tri-gauge.

3. Hold the Tru-Grind Tool Holder comfortably in your hands. Locate the ball foot of the Tool Holder in the Pivot Point. Apply the chisel to the grinding wheel and rotate it from side to side. Recheck your angle. Now continue to grind until you have a sharp edge. With this system you may grind all of the gouge at one time or you may grind the sides or the nose or whatever area you need to. When reshaping a badly ground gouge, work on the sides only, until they are correct, and then blend the nose to match.



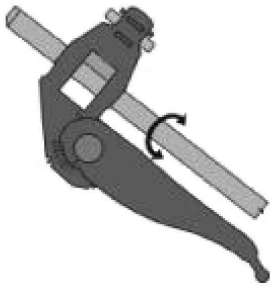
4. It is important that the pivot leg angle is the same every time. So once you have decided on which angle to use, then create a mark to record this angle.

5. If a long-fluted gouge is slim or won't align true in the Toolholder then insert the Short Steel Rod supplied under the clamp block "V" and into the flute of the gouge. Tighten as normal.

FINGERNAIL OR CELTIC GRIND BOWL GOUGE

This style of gouge has the sides of the tip ground back. To achieve this you need to adjust the pivot leg on the Tool Holder forward to between positions #4 and #8. The higher the number, the more the wings or sides will be ground back. Take note of the number setting you have chosen. This can be written on the wooden handle of the gouge to help you repeat the same grind. The flute shape should be parabolic or “U” shaped to achieve a good Celtic or Fingernail grind.

SPINDLE GOUGE



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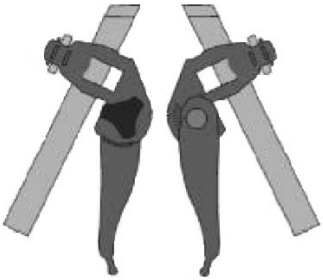
SPINDLE ROUGHING GOUGE

Roughing Gouges should be sharpened with the Pivot Leg at position # 1 and at a bevel angle of 45 degrees.

This will result in a finer edge towards the wings of the gouge than at the centre, but the tool will operate just as well as one with exactly 45 degrees across the whole edge.

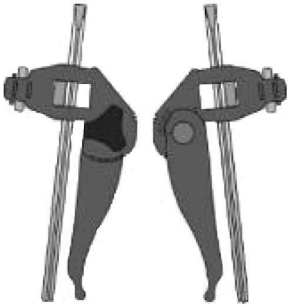
The end of a Spindle Roughing Gouge should be straight across - no grinding back of the wings.

SKEW CHISEL



Place your skew chisel into the Tru-Grind Toolholder with the blade vertical and the point at the bottom. Adjust the protrusion to 2 inches or 50mm from the tool holder body and clamp it down firmly. Put the pivot leg into the rear base pivot position and lay the body on its side. Adjust the Toolholder leg angle until the cutting edge is horizontal with the face of the wheel. Then lay it on the wheel and adjust the base slide until the bevel angle is correct - we suggest 22 degrees. Start the grinder and commence sharpening. The more you move the skew from side to side, the more radiused will be the edge. The shape of this edge is a personal choice. Rotate the Toolholder to sharpen the other side.

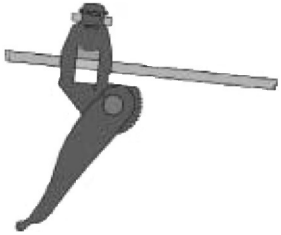
PARTING TOOL



Place the tool in the Tru-Grind Toolholder horizontally with the same tool protrusion as other tools. Next lay the tool on the wheel and adjust the pivot leg until the point angle is approximately 35 degrees. Rotate the Toolholder to sharpen the other side.

TRADITIONAL SCRAPER

Place the scraper in the Toolholder protruding as before and clamp tight. Next move the pivot leg forward as far as it will go i.e. position #9 (where it is level with the nose of the scraper). Place the pivot leg into the forward pivot position on the base slide. Move the base slide in or out to adjust the bevel angle as required (Generally around 55 degrees).



Apply the scraper to the wheel and rotate until your preferred shape is achieved.

This method can also be used to sharpen Ring Tools used for hollowing.

NEGATIVE-RAKE SCRAPER

A square-ended negative-rake scraper is sharpened like a skew, but usually with less angle to the cutting edge.

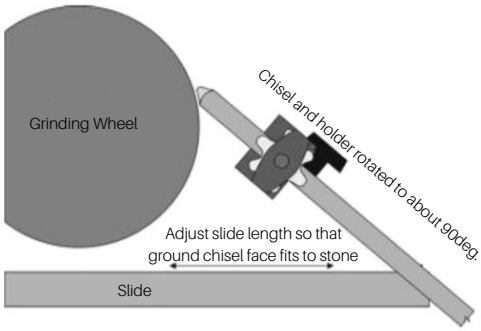
Negative-rake scrapers with an unequal and curved sharp edge need to be sharpened using a regular grinder tool rest or the Sturdy Rest on the Tru-Grind system.

SHARPENING YOUR OLD GRIND OR SOMEONE ELSE'S GRIND

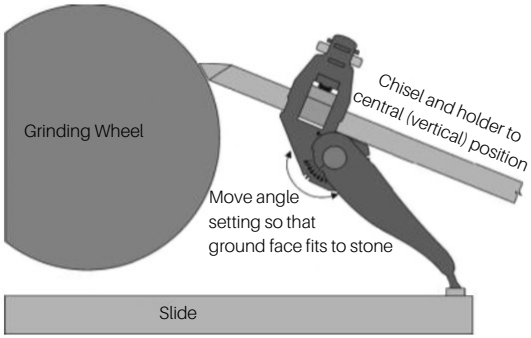
Every now and then someone will come along and ask for an oddball woodturning chisel to be sharpened. Skews and parting tools are easy but gouges need a little more attention. A common different gouge grind is one with a greater sweep to the wings, sometimes it is a gouge with a small angle on the nose and greater angle on the wings, or maybe just one that is in between the "standards" previously mentioned.

First Setting: Fit the gouge into the Tru-grind Toolholder with a 50mm (2") protrusion as you would for any other gouge. Loosen the Base-slide of the sharpening jig and put the foot of the toolholder into the Pivot Point at the end of the slide.

Now, rotate the Toolholder until the chisel is around towards right angles to the stone, or the last bit of the ground face is still in contact with the stone. Shift the Base-slide in or out until that part of the face of the chisel is in contact with the stone so that the entire length of the face will be ground. Tighten the Base-slide Tightening lever.



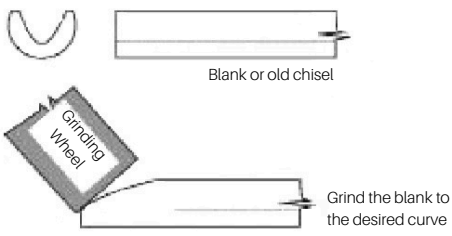
Second Setting: Rotate the Toolholder and chisel back to a central (vertical) position. Change the tool holder head to leg angle until the nose of the chisel is in contact with the stone so that the entire length of the face will be ground. Tighten the nut.
Return to the first setting to check that all is well.
Sharpen the chisel.

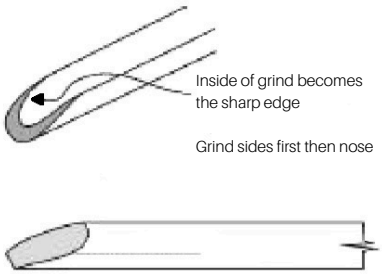


RE-SHAPING OR MAINTAINING THE SAME SHAPE?

If, before you commence sharpening, the shape of your gouge is grossly incorrect, you have various options to bring it back to a desired shape. This may be because you have purchased a new, unshaped, gouge or if, through repeated sharpening, the shape has changed from the original.

1. You can correct the shape on the wheel freehand.
2. Set the Tru-Grind to match another chisel in your kit or a borrowed one.
3. Roughly shape a fingernail grind as in the drawing below before sharpening the gouge in the Tru-Grind jig.





CARE AND MAINTENANCE

Maintenance of your Tru-Grind product is important to ensure you have an optimal experience with your product.

Over time grinding grit will work its way into the main thread of the Tool holder to cause binding. The following steps will provide you with the simplest way to clean this.

1. Spray your Tool Holder thread with maintenance spray for example WD 40.
2. Spin the nut up and down the thread a few times, you will see the grit falling away.
3. Remove the nut from the thread and take it out of your Tool Holder (be careful not to drop any of these parts).
4. Place the nut back onto the thread and continue to spin up and down until all the debris is gone.
5. Use an old cloth and rub up and down the thread continuing to spin the nut up and down at the same time.
6. When satisfied it is clean and dry place the thread and nut back onto your tool holder.

Scan this code to find a demonstration video on You Tube "Woodcut Tru-Grind Tool Holder maintenance" by Phil Irons

Never quench your M2 High Speed Steel (HSS) gouge tips in water for cooling during grinding because the shock can lead to shrinkage at the fine tip and develop fine cracks as a result. It is better to leave the tool to cool naturally.

Regularly use your compressed air gun to blow the grit away which has built up in your Base Slide and Sturdy Rest parts. The supplied magnet can also be used to clean out grit build up.
It is also advised you dismantle the system from time to time and give all parts a good clean with a cloth.

Apart from these simple considerations no further maintenance will be required. Any spare parts can be supplied direct from the factory.

TRU-GRIND CBN GRINDING WHEELS

The Woodcut Cubic Boron Nitride (CBN) Grinding Wheels enable a turner to sharpen tools with the same approach as a conventional stone wheel on a standard bench grinder.

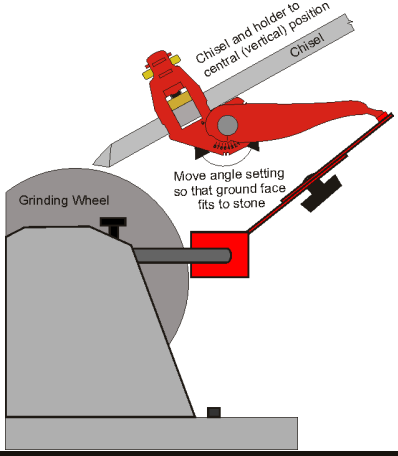
- Only minimal pressure is required.
- Fine and even finish to tools
- Won't change shape, last longer
- Don't require dressing or conditioning
- Only light pressure required
- Each CBN wheel is individually balanced
- Smooth sharpening from 100 to 3500 rpm
- Cool cutting, no burnt or blue edges

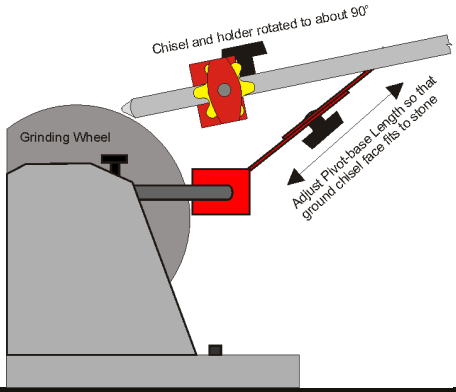
A CBN wheel is far better suited for sharpening high speed steels and will withstand the friction from grinding with much heat produced than with a diamond wheel. This also means that you will not need to reset your sharpening jig after it has been set to the required position.

A range of CBN wheel sizes and additional reducing bushes designed to fit most grinders are available.

TOOL HOLDER FOR WET GRINDER

The Tru- Grind Wet Grinder Pivot Base is designed to support turners to utilise the unique capabilities of the Tru-Grind Tool Holder on a Wet Grinder.





TRU-GRIND ORIGINAL STURDY REST

The Tru-Grind Original Sturdy Rest was designed as the answer to the problem of flimsy, and difficult to adjust, tool rests. Made from thick plate steel to eliminate flexing it can be easily attached to your Tru-Grind Original Base Slide.

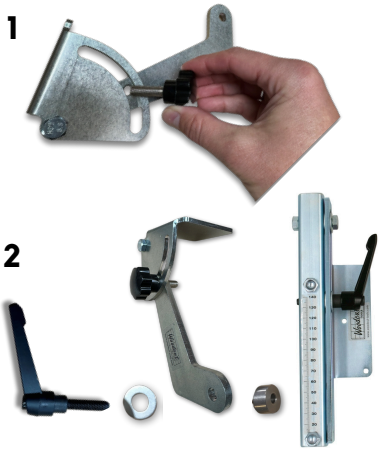
Tru-Grind Original Sturdy Rest Box Contents:

1. Sturdy Rest
2. Washer
3. Spacer
4. Adjustable Handle
5. Cam Loc Handle

Note: The Sturdy Rest will sit to the right on the Left Hand Base Slide (as demonstrated in image above) and to the left on the Right Hand Base Slide.

Assembly:

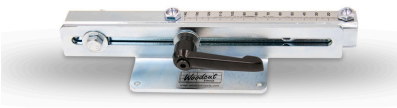
1. Screw the adjustable Handle into the side of your Sturdy Rest. See image.
2. Place the spacer against your base slide, next the Sturdy Rest then the washer (with the shiny side against the Sturdy Rest) and finally the Cam Loc Handle screws through all of these parts to secure it to the Base Slide. Pull the handle out and twist to get it sitting in the correct position to lock and unlock into place.
3. Ensure all parts are tightly secure prior to use.



There are two hole options to give you flexibility as to where to place your sturdy rest. However, the front hole is most commonly used as in the assembled image above.

OPTIONAL EXTRAS

Tru-Grind Original
ADDITIONAL BASE SLIDE
Get an additional base slide to have the Sharpening System set up on both sides of your grinder.

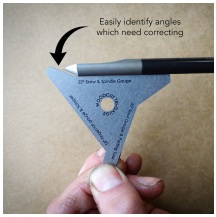


Tru-Grind Original
STURDY REST
The answer to the problem of flimsy and difficult to adjust grinder tool rests. The Tru-Grind Original STURDY REST is made from thick plate steel to eliminate flexing and can be easily attached to your Base-slide.

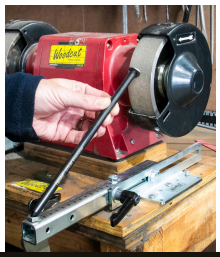
TOOL HOLDER FOR WET GRINDER
The Tru- Grind Wet Grinder Pivot Base is designed to support turners to utilise the unique capabilities of the Tru-Grind Tool Holder on a Wet Grinder.

ADDITIONAL TOOL HOLDER.
Many customers prefer to have several jigs so they can keep them permanently set at their regularly used angles.

TRI-GAUGE
Code: TRIG
A very handy tool that anyone with a sharpening system should have to ensure accurate sharpening angles for all woodturning tools.



STEM SHARPENER
Code: STEM
Highly recommended tool for Safe and Easy sharpening of Cup Cutters and Scraper Blades. Screw the blade onto the Stem Sharpener to easily, and safely, sharpen your small cutters using your Base Slide.



OPTIONAL UPGRADE

TRU-GRIND PREMIUM
BASE SLIDE AND STURDY REST

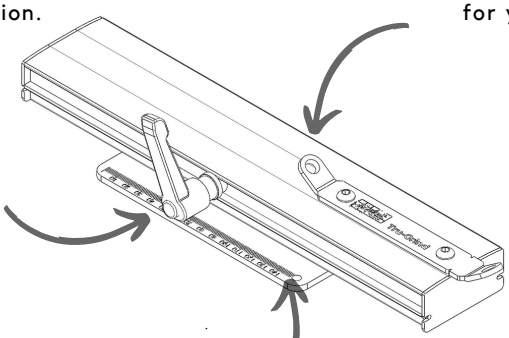
In 2020, with customer feedback Woodcut Tools began a process to design a new, higher spec, Base Slide and Sturdy Rest to make the sharpening process even more simple, accurate and repeatable. After almost three years of testing various new Base Slide and Sturdy Rest design prototypes with turners across the world to ensure the new products were right, the new Woodcut Tru-Grind Premium Base Slide and Sturdy Rest was available for customers in 2023.

Scan QR Code for Tru-Grind Premium

Photo kindly supplied by Axminster Tools

The Cam Lock handle secures the base slide into position.

As described below, the handle can be simply moved to the other side in order to mount your Base Slide on the right hand side of your Grinder.



The rear Pivot Point can be used for your Scraper tools and T-bar dresser

Your Base Slide Base Plate features a measurement scale and reference marker that is designed to support you to accurately establish the position of your Base Slide and therefore enable you to repeat this set up.

The Pivot Point closest to you will be used for the majority of your tools.

OTHER SIDE BASE-SLIDE ASSEMBLY

The Base-slide is made to fit on either side of the grinder but may be supplied to fit the wrong side for your preference on your grinder.

If you prefer to use the other side simply take the assembly apart and re-assemble it. The picture below shows the parts. Assemble it for the other side. Then mount it under the wheel in the same manner as instructed for the original fitting making sure that the pivot points are in line with the centre line of the grinding wheel.

THE ULTIMATE SHARPENING CENTRE

This will incorporate a Base-slide under each wheel. One side for shaping using a 60 or 80 grit wheel and the other side for finishing using a 120 grit or finer wheel.

USER SUPPORT

Email support@woodcut-tools.com

Please subscribe to our Woodcut Tools YouTube channel, Facebook and Instagram pages, to stay up to date with our latest product videos.

@woodcuttoolsnz #woodcuttrugrind

woodcut-tools.com

GENERAL SAFETY GUIDELINES

Woodcut Tools recommends these guidelines to ensure your safety.

1. Please read this user guide before operating this product.. Ensure you are familiar with the product's application and limitations plus the specific hazards peculiar to it.
2. Wear safety glasses. A full face mask is recommended. . Safety glasses (must comply with ANSI STANDARD Z87.1 USA) Everyday eye glasses usually are only impact resistant; they are not safety glasses. Also use face or dust mask if cutting operation is dusty.
3. Wear appropriate clothing. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewellery, which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
4. Use ear protectors. Use earmuffs for extended period of operation. Use muffs rated to 103 DBA LEQ (8 hr).
5. Do not operate in a high risk environment.. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
6. Ensure the work area is clean. Cluttered areas and benches invite accidents. Build up of sawdust is a fire hazard.
7. Keep children and visitors away. All children, infirm and visitors should be kept a safe distance from work area.
8. Ensure the workshop is childproof with locks, master switches, or by removing starter keys.
9. Ground all tools. If the tool is equipped with a three-prong plug, it should be plugged into a three hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.
10. Ensure the tool is disconnected from the power supply while the motor is being mounted, connected or reconnected.
11. Disconnect tools from wall socket before servicing and when changing accessories such as blades, bits, cutters and fuses.
12. Prevent accidental starting . Make sure switch is in the Off position before plugging in power cord.
13. Never leave machine running unattended. Do not leave tool unless it is turned off and has come to a complete stop.
14. Keep guards in place and in working order.
15. Use the correct tool. Do not use a tool or attachment to do a job for which it was not designed.
16. Use recommended accessories. The use of improper accessories may cause hazards.
17. Don't force the tool. It will do the job better and be safer at the rate for which it was designed.
18. Maintain tools in optimum condition. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
19. Avoid standing on the tool. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
20. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
21. Don't over reach. Keep proper footing and balance at all times.
22. Direction of feed. Feed work into a blade or cutter against the direction of rotation or the blade or cutter only.
23. Attention to work. Concentrate on your work. If you become tired or frustrated, leave it for awhile and rest.
24. Secure work. Use clamps or a vice to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
25. Check for damaged parts. Before further use of the tool, any part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, mounting, and any other conditions that may affect its operation. Any damaged part should be properly repaired or replaced.
26. Drugs, alcohol and medication. Do not operate tool while under the influence of drugs, alcohol or any medication. 27. DUST WARNING. The dust generated by certain woods and wood products can be harmful to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

WARRANTY TERMS

Woodcut Tools are guaranteed against faulty workmanship and faulty materials for twelve months from date of purchase. Fair wear and tear excluded. We will replace or repair any tool returned to the supplier or factory free of charge. Freight to and from the factory will be at the expense of the purchaser.

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