Woodcut®
TOOLS LIMITED

USER GUIDE

TRU-GRIND
SHARPENING SYSTEM

INCLUDING:

TOOL HOLDER | BASE SLIDE
STURDY REST | WET GRINDER BASE

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

for turners
BY TURNERS

ABOUT WOODCUT TOOLS

In the 1970's Woodcut Tool's founder Ken Port owned and operated a souvenir business in New Zealand, Ken would turn the wooden souvenirs he would sell. Frustrated with the woodturning tools available to him, Ken designed and developed a portfolio of woodturning products for his own use.

In 1990 Ken formed Woodcut Tools, therefore making these tools available to all turners, wanting to make it as easy as possible for customers to enjoy their turning experience, by taking the tool, put to wood and see the shavings!

Ken Port
Founder of Woodcut Tools
1970's, New Zealand

Today the company is still located in New Zealand and is owned by the Hewitt family. Ken remains actively involved in product design for Woodcut Tools.

We are driven by the desire to give customers the best quality products with no compromises. Our approach is to work close with the woodturning community, listening to customers including professional turners and taking the time to ensure the product is right. For turners, by turners.

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 the Tru-Grind design is the unique 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.

In 2020, with customer feedback Woodcut Tools began a process to improve the Base Slide and Sturdy Rest to make the sharpening process 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 Base Slide and Sturdy Rest was available for customers in 2023.

We trust you enjoy these new products, please let us know if you have any feedback support@woodcut-tools.com

Phil Irons
Woodcut Tools Ambassador
UK

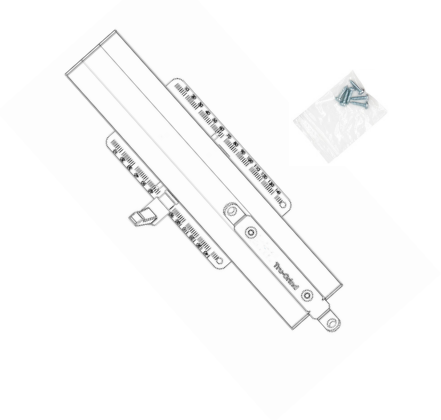
CONTENTS

CUSTOMER SUPPORT

In addition to this User Guide there is also a video available on You Tube that demonstrates the set up process and how to sharpen the range of turning tools. To view the Support video please search on You Tube 'Woodcut Tools Tru-Grind Sharpening System' (published 2023)

You can also contact our friendly support team at support@woodcut-tools.com.

BASE SLIDE



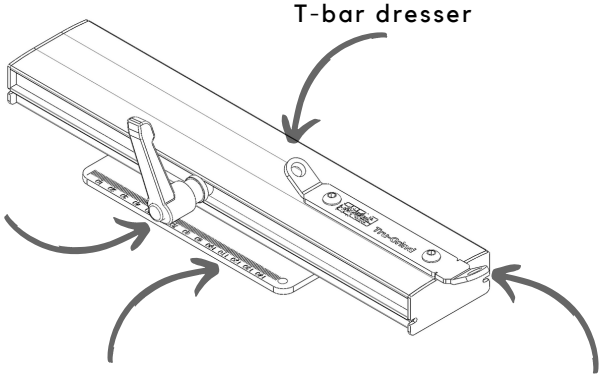
Contents:

1. Base Slide with removable Face Plate
2. Three Screws to secure the Base Slide to your work bench.

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.

We recommend you note down this set up for every tool you sharpen.

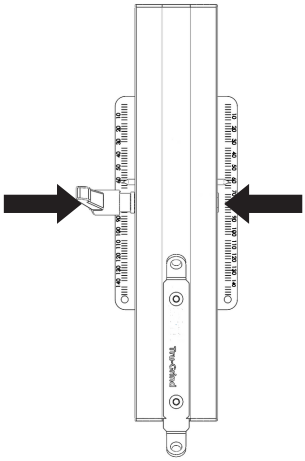
The Pivot Point closest to you will be used for the majority of your tools.

RIGHT HAND BASE SLIDE ASSEMBLY

Your Tru-Grind base slide is delivered to you set up for use on the left hand side of your Grinder. However your Base Slide is designed to be used on either the left or right hand side of your Grinder. It is a simple process to update the set up from left to right hand side by following simple steps.

There is also a video available on You Tube, please search for: 'Woodcut Tru-Grind Base Slide' published 2023.

- Pull the Cam Lock Handle out and turn until the handle is disassembled from the Hex Bolt.
- Remove Cam Lock Handle, Hex Bolt and Bush.
- Assemble Hex Bolt and Bush to the opposite side from which you have previously disassembled.
- Assemble Cam Lock Handle back onto the Hex Bolt and fasten until the Handle is secure.



ASSEMBLY WITH YOUR GRINDER

Firstly we recommend you view the video available on You Tube search for: 'How to sharpen with the Woodcut Tools Tru-Grind,' published 2023.

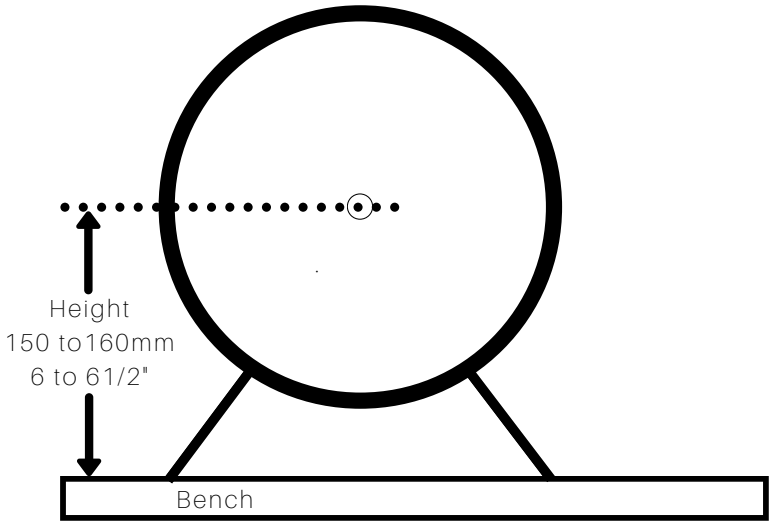
1. Prepare to set up the product either on a wooden base or direct to your workbench. You will need a screwdriver, square, pencil and ruler.

TRU-GRIND BASE SLIDE

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.

2. 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) for both 150mm (6") and 200mm (8") grinders. Please see the following image.

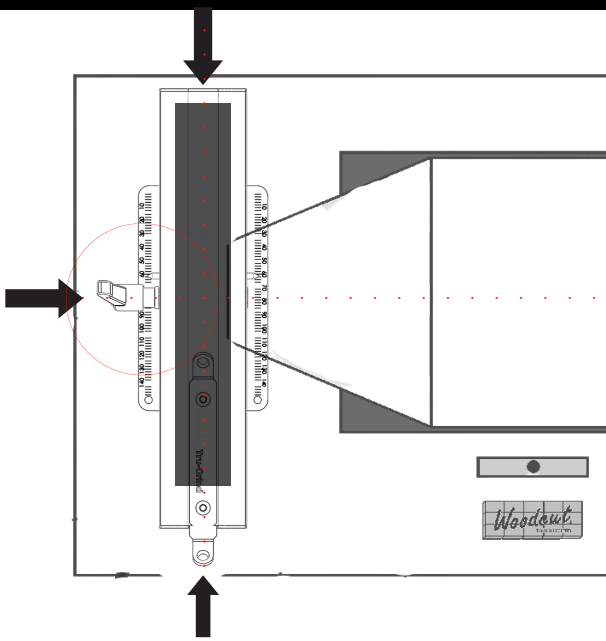
It may be necessary to place a packer under the mounting base of the grinder or under the Tru-Grind Base-Slide to achieve the correct height.



3. Set your Tru-Grind Base below the Grinding wheel. Align the Base Slide pivot points as close as possible to the center line of the Grinding Wheel. Please see following illustrations for set up with a 6" or 8" wheel.

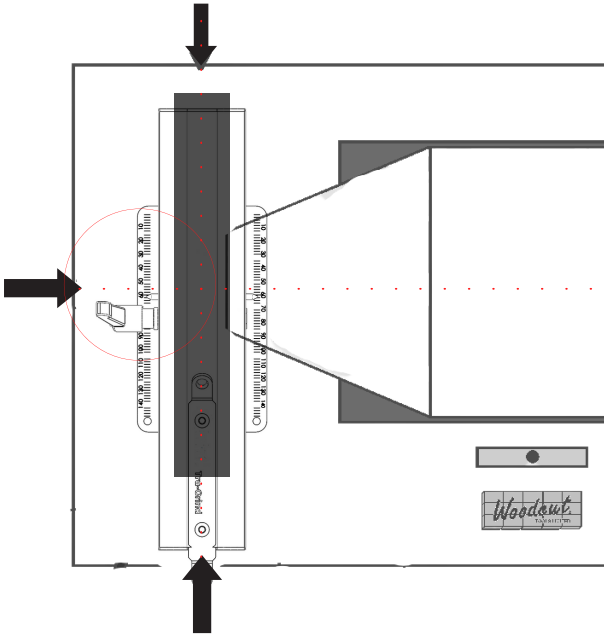
6" (150MM) WHEELS

Align the centre of the Tru-Grind base plate with the centre line of the grinder.



8" (200MM) WHEELS

Bring the base plate forward to about ¾" (20mm) from the centre line of the base slide.



TOOL HOLDER

Contents:

1. Tool Holder Jig
2. Removable Short Steel Rod in Clamp Block

Your Woodcut Tru-Grind Tool Holder is designed to enable woodturners to repeatedly grind perfect bevels on all types of Bowl and Spindle gouges, Roughing gouges, Skews, and Scrapers with a single Tool Holder. The Tool Holder is uniquely designed to lock into place, ensuring you will be able to repeat your perfect bevel every time you re-sharpen the tool

TRU-GRIND TOOL HOLDER

When setting up, fix a stopper of hard wood or similar along the front edge of the base board or your bench which is used to set the tool protrusion. This needs to be 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. It is important that you repeat the same protrusion each time you set up your tool in your Tool Holder. This enables you to repeat the same grind.

Please see the following image to illustrate.

TOOL HOLDER SHORT STEEL ROD

Under the clamp block you will find a short steel rod. This rod is supplied to be used to support you when setting using a long-fluted gouge or other tool that is slim or won't align true in the Tool Holder.

Insert the Short Steel Rod under the Clamp Block "V" and into the flute of the gouge. Fasten as normal.

SHARPENING GUIDELINES

You will find a demonstration video on You Tube - Search 'How to sharpen with the Woodcut Tru-Grind'

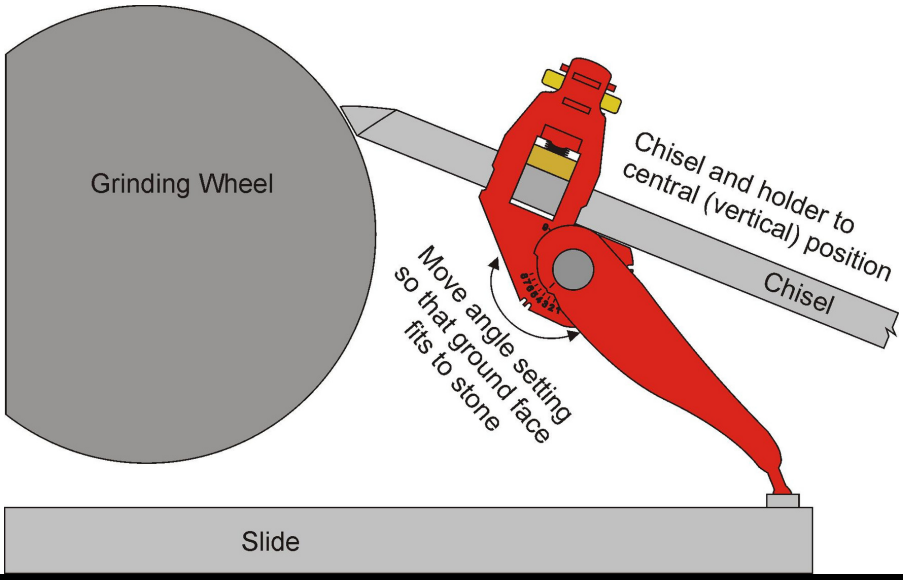
Grinding grit can damage your eyesight. Make sure you are wearing approved safety glasses before starting your grinder.

1. Place your tool into the Tru-Grind Tool Holder, we recommend holding the tool holder vertically and initially only loosely clamping your tool in your Tool Holder.

2. Adjust tool protrusion to 50mm (2") using your stopper as previously described. Fasten clamp.

3. The position of the Tool Holder Pivot Leg determines the style of grind. Please refer to the following pages for guidance on sharpening different styles of woodturning tools.

The greater the angle that you adjust the Pivot Leg to the Tool Holder head (or the greater the number for example position 9), the greater the Bevel angle, including the Nose and the Sides of the tool and the further back you will grind the sides of the gouge (or increase the length of the fingernail). Position 9, with the Pivot Leg pushed all the way forward, is used for sharpening Scrapers and Ring Tools.

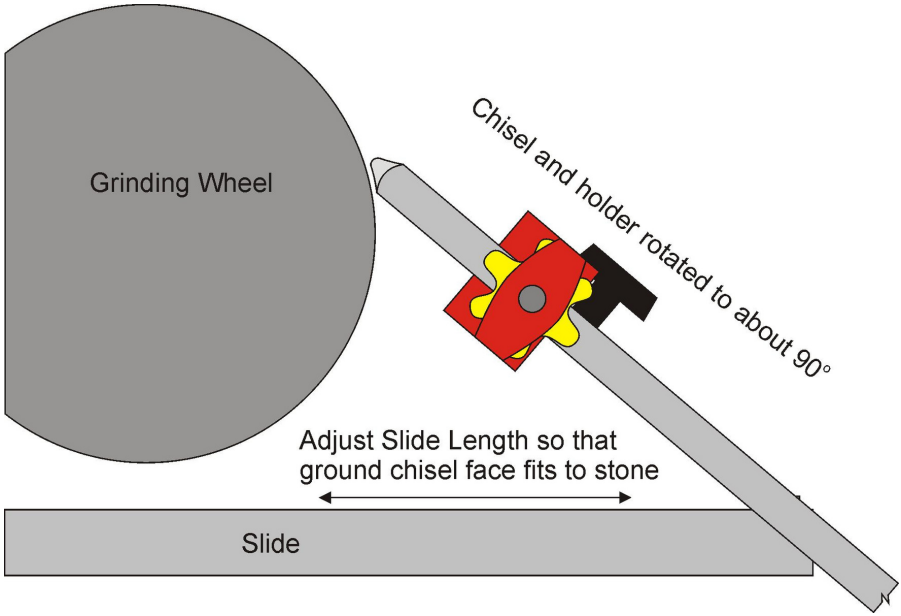


4. Mark the face of your chisel with a black marker. This will assist you to check the accuracy of your sharpening set up.

5. Loosen the Base-slide of the sharpening jig and mount the foot of the Tool Holder into the Base Slide Pivot Point.

6. Adjust the Base Slide in or out to achieve your required bevel angle, especially at the nose of your chisel.

7. With the Grinder powered off, apply the chisel to the Grinding Wheel and turn the Grinding Wheel by hand. Now, rotate the Tool Holder until the chisel is right angles to the Grinding Wheel, or the last section of the ground face is still in contact with the Wheel. Shift the Base-slide in or out until that part of the face of the chisel is in contact with the Grinding Wheel so that the entire length of the face will be ground. Secure the Base-slide Cam Lock lever. Check the angle and adjust the Base Slide until you see parallel lines in the black marker across the length of the bevel of your tool.



8. For each chisel write down, or record in some other way, the angle setting of the Tool Holder and extension of the Base-slide. A handy suggestion is to write the numbers onto your wooden tool handle.

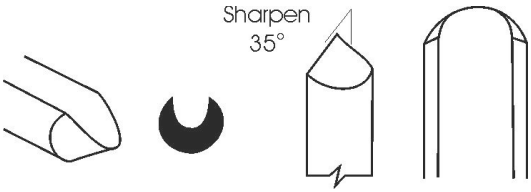
9. Begin Sharpening. Hold the Tru-Grind Tool Holder comfortably in your hands. Holding the Tru-Grind Tool Holder correctly is important. We encourage you to watch the 'How to sharpen with the Woodcut Tru-Grind' video available on You Tube.

Apply the chisel to the Grinding Wheel and rotate it from side to side. Continue to grind until you have a sharp edge. With this product you may sharpen all of the gouge at one time or you may sharpen the sides or the nose or whatever area you need to.

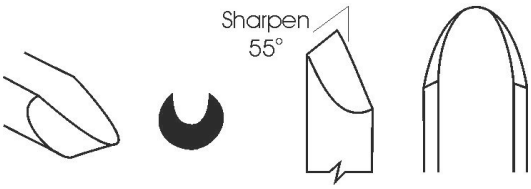
When reshaping a badly ground gouge, work on the sides only, until they are correct. Then blend the nose to match.

COMMON SHARPENING PROFILES

The following is a summary of the most common sharpening profiles and their purpose.

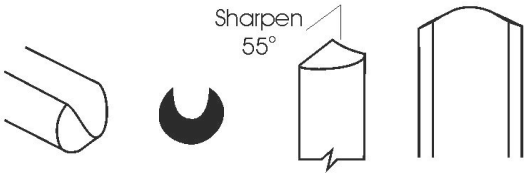


Traditional Bowl gouge. Used on its side with the flute facing in the direction of the cut. With the bevel rubbing for a smooth finish even on end grain. Usually 10 to 15mm wide.

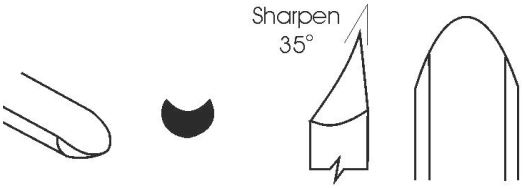


Fingernail or Celtic Grind Bowl gouge. Used on its side with the flute facing in the direction of the cut. With the bevel rubbing for a smooth finish even on end grain. Usually 10 to 15mm wide.

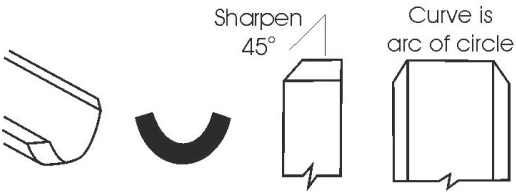
COMMON SHARPENING PROFILES



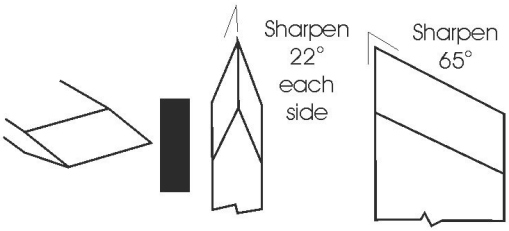
Bowl bottom gouge. Used on its side with the flute facing in the direction of the cut. Intended for use in the bottom of bowls. Usually 10 to 15mm wide.



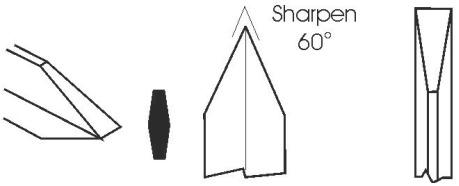
Spindle or Detail gouge. The main shaping tools of the spindle turner. Used for detail work, beads, coves, and ogees, to which the modern round shape is particularly suited. 5 to 15mm wide.



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.

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 position #4, this will vary depending on your grind. The higher the number, the more the wings or sides will be ground back.

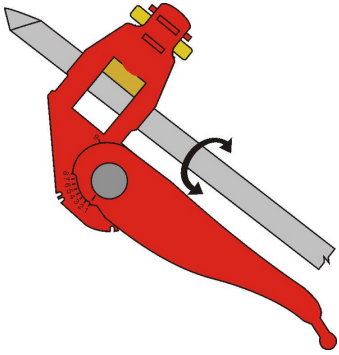
The flute shape should be parabolic or "U" shaped to achieve a good Celtic or Fingernail grind.

SPINDLE GOUGE

This style of gouge has the sides of the tip ground back. The higher the number, the more the wings or sides will be ground back. Woodcut Spindle Gouges are sharpened at position #3.

SPINDLE ROUGHING GOUGE

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

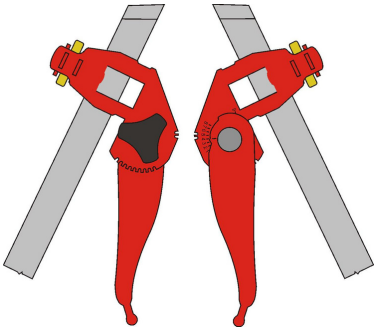


This will result in a finer edge towards the wings of the gouge than at the centre, but the tool will operate just as well as one with exactly 45 degrees across the whole edge. The cutting edge of a Spindle Roughing Gouge should be straight across - no grinding back of the wings.

SKEW CHISEL

Place your skew chisel into the Tru-Grind Tool Holder with the blade vertical and the point at the bottom. Put the pivot leg into the rear base pivot position and lay the body on its side. Adjust the Tool Holder leg angle until the cutting edge is horizontal with the face of the wheel. We recommend position #2.

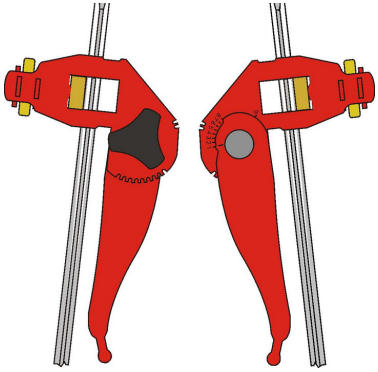
Lay it on the wheel and adjust the base slide until the bevel angle is correct - we recommend 22 degrees. To minimize the risk of experiencing a catch, we recommend sharpening a slight radius on the bevel of the Skew Chisel. This radius creates additional distance between the project and the edge points. Rotate the Tool Holder to sharpen the other side.



Alternatively you may want to sharpen your Skew chisel with the option of the Woodcut Tru Grind Sturdy Rest Platform. Please refer to page 18 of this User Guide for further information

PARTING TOOL

Place the tool in the Tru-Grind Tool holder horizontally with the tool protrusion 2 inches or 50mm 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 Tool Holder to sharpen the other side.

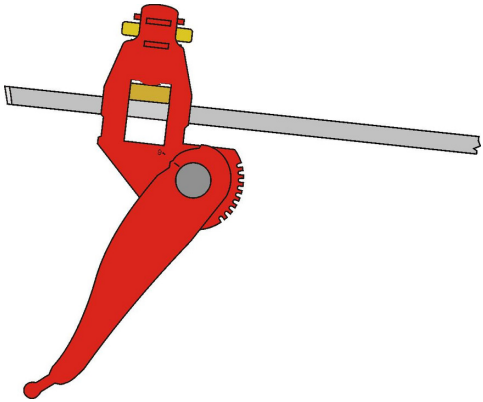


SCRAPERS

For Traditional Scrapers and Negative Rake Scrapers set the Tool Holder to 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 the wheel until your preferred shape is achieved.

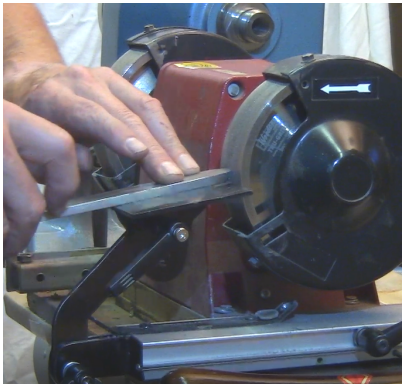
This method can also be used to sharpen Ring Tools used for hollowing.



A square-ended Negative-Rake Scraper is sharpened like a Skew, but usually with less angle to the cutting edge.

Depending on the dimensions of your grinding station with the Tru-Grind Base Slide you may not be able to achieve sharpening this way in your toolholder.

Another option is to use the Tru-Grind Sturdy Rest.
See page 18-19.



TRU-GRIND STURDY REST

STURDY REST BOX CONTENTS

1. Sturdy Rest
   with Base Slide Face Plate attachment

If you prefer to have continuing use of a simple Tool Rest at the Grinder then you have the option to add the Woodcut Tru-Grind Sturdy Rest .

STURDY REST ASSEMBLY

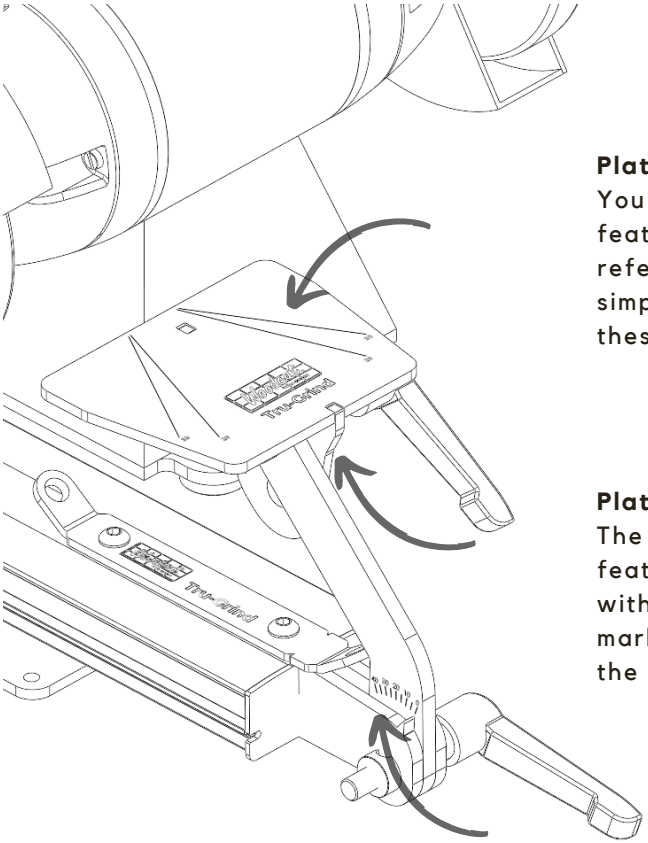
To assemble your Sturdy rest with your Tru-Grind Base Slide, firstly remove the front Face Plate of your Base Slide. Then insert your Sturdy Rest in place of the Face Plate and using the screws you previously removed, securely fasten to your Sturdy Rest.

You may want to keep the standard Base Slide Face Plate in case you want to remove your Sturdy Rest at any time.

The Sturdy Rest conveniently swings down out of your way for when you do not need to use it.

Reference marks to support you to repeat your sharpening grind:

You will find reference marks with a measurement scale on the Platform and the arm of your Sturdy Rest. We encourage you to take a note of the reference marks that you utilise to assist you to simply repeat this set up.



Platform reference marks:
You will note that the Platform features dual 20 and 30 degree reference marks to assist you to simply repeat the sharpening of these profiles.

Platform height adjustment:
The top of the Sturdy Rest arm features three machined holes with corresponding reference marks to assist the adjustment of the height of the platform.

Arm reference marks:
The Sturdy Rest arm features reference marks to assist you to simply repeat the set up.

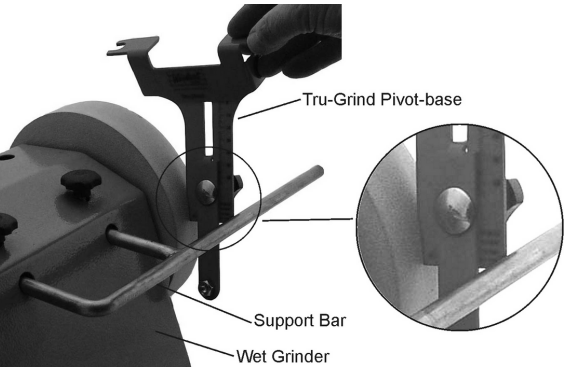
TOOL HOLDER FOR WET GRINDER

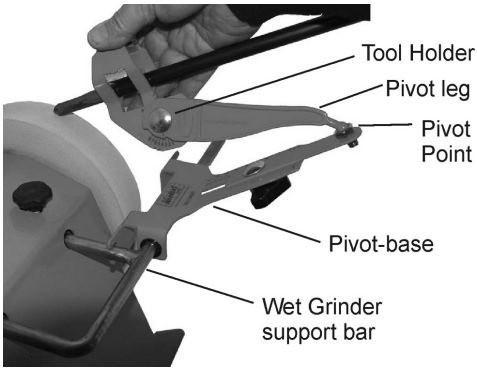
The Tru- Grind Wet Grinder Pivot Base is designed to support turners to utilise the unique capabilities of the Tru-Grind Tool Holder on a Wet Grinder.

TOOL HOLDER FOR WET GRINDER ASSEMBLY

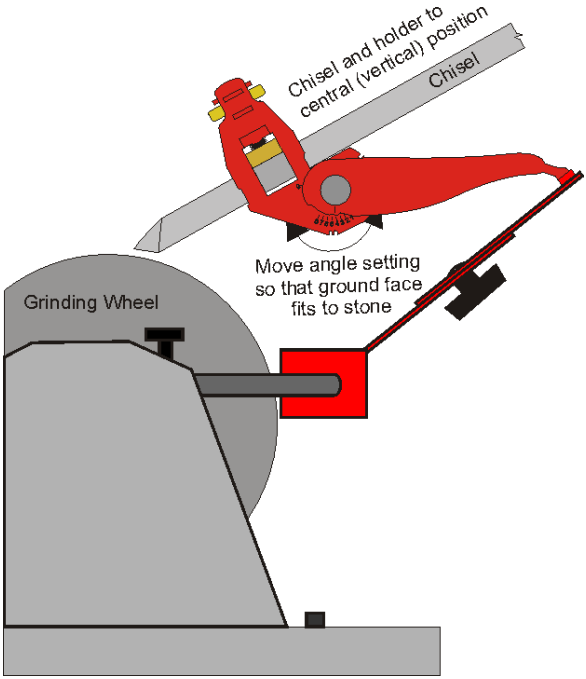
Position your Wet Grinder on a stable bench at a comfortable height, close to power and water for replenishment of the water reservoir.

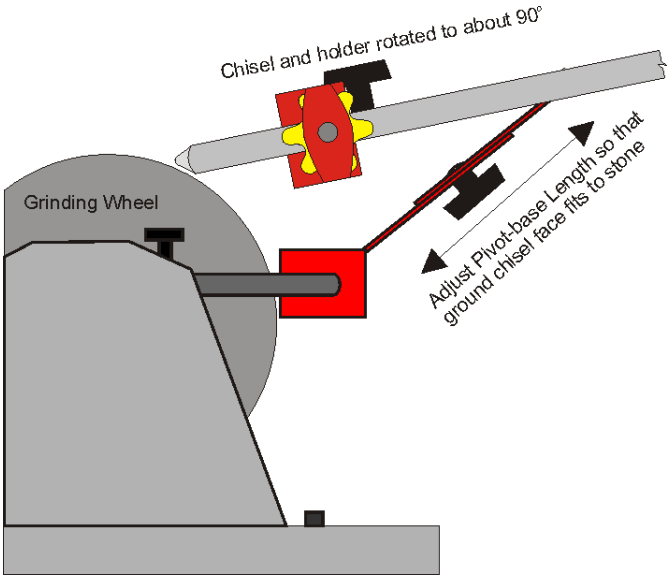
Assemble the Wet Grinder support bar in the horizontal position with the open end towards the Wet Grinding Wheel.





Take the Tru-Grind Pivot-Base and use the two concave shapes beside the arrows (see inset below) to adjust the distance between the Support Bar and the Wet Grinding Wheel. Lock the Support Bar in position by tightening the two knobs.


Chisel and holder to central (vertical) position
Chisel
Move angle setting so that ground face fits to stone
Grinding Wheel


Chisel and holder rotated to about 90°
Grinding Wheel
Adjust Pivot-base Length so that ground chisel face fits to stone

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.

You will 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.
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.

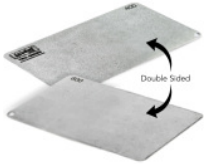
OTHER TRU-GRIND PRODUCT

TRU-GRIND CBN GRINDING WHEELS:
Cubic Boron Nitride (CBN) Grinding Wheels have unique benefits over a conventional stone wheel.

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

Tru-Grind Stem Sharpener:
Uniquely designed to hold Cup, Disc and Flat Scraper cutters up to 25 mm or 1" diameter for sharpening.

Tru-Grind Credit Card Hone:
Double sided with 400 on one side and 600 grit on the other.



USER SUPPORT

Please find the Tru-Grind User Support video at www.woodcut-tools.com in the User Guides Tab.

Email: support@woodcut-tools.com

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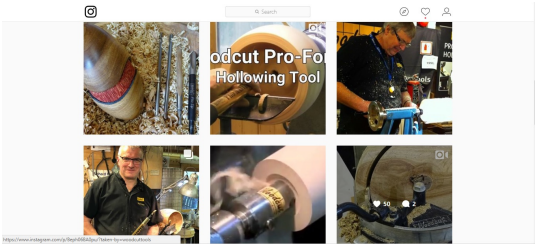

GENERAL SAFETY GUIDELINES

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.

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