

Woodcut[®]
TOOLS LIMITED



USER GUIDE

BOWLSAVER

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

for turners
BY TURNERS

ABOUT WOODCUT TOOLS

Woodcut Tools was established from a passion for woodturning.

In the 1970's Woodcut Tool's founder Ken Port owned and operated a souvenir business in Northland, New Zealand. Ken often turned many of the wooden souvenirs he would later sell. Frustrated with the woodturning tools available to him Ken resourcefully designed and developed a portfolio of woodturning products. Ken wanted 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!

Today the company is still located in New Zealand and is currently 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, professional turners and taking the time to ensure the product is right. For tuners, by turners.

Woodcut Tools breaks away from the current trend of cheap, low-quality products by integrating together a mix of traditional methods and modern technology. An emphasis on true craftsmanship and continuous improvement.

PRODUCT BACKGROUND

The two bladed Woodcut Tools Bowlsaver has been available since 1995. The Bowlsaver has been designed for bowl blanks up to approximately 350mm x 150mm (14" x 6") in size. From this blank the Bowlsaver will cut bowls as small as 75mm (3") diameter and up to 300mm (12") diameter, providing you with the benefit of saving wood and therefore money.

Every tree species will turn differently. Experiment and determine what woods you like to core better than others.

BOX CONTENTS



1. Rotation Plate
2. Tailstock assembly
3. Screws
4. Allen Keys
5. Blades
6. Handle Clamp
7. Handle
8. User Guide
9. Planning templates
10. Tool post may be included,
size varies

ASSEMBLY



A very useful and extensive 1hr video by Professional turner Phil Irons is available on our website under the Support Tab.

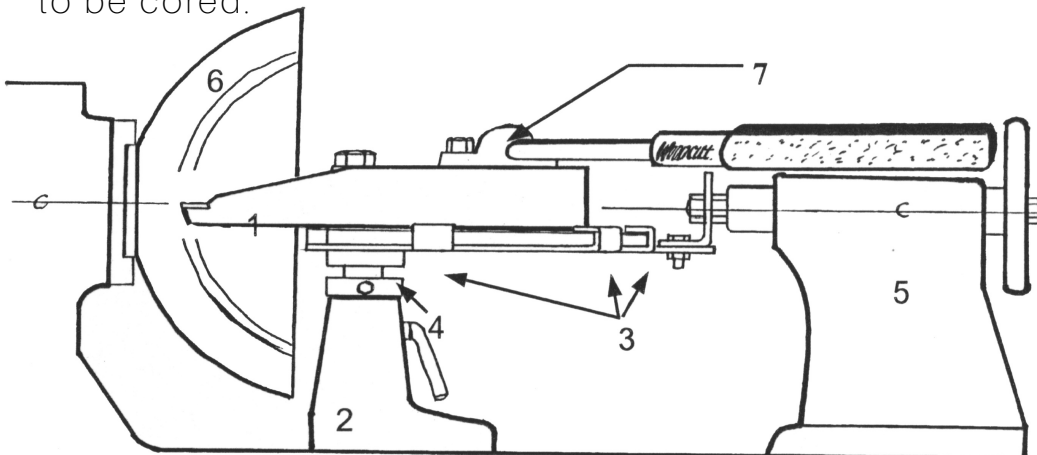
It includes set up, use and handy tips about the Bowlsaver.

- Firstly take the rotation plate assembly and place the tool post into position underneath the base plate. Simply thread the tool post into the hole, and tighten with the Allen key provided.
- Ensure the toolpost is tight, then loosen the lock screw on the shaft collar and lift the shaft collar up underneath the base plate as far as it will go and then lightly tighten by hand.
- Remove your toolrest, slide the tailstock back and drop the bowlsaver unit into place.
- Adjust the rotation plate anti-clockwise until the plate lines up with the second thrust tab.
- Fit the blades into position and place the handle clamp on top. Insert the two cap screws and tighten by hand, check that the small blade does not protrude past the plate. Tighten screws firmly.

Note the blade not in use can be stored, upside down, in the opposite side of the rotation plate. See image.



- Next use your drive spur to determine the correct height, raise the saver until the cutter is on centre, then lower the shaft collar and tighten the locking screw (fine adjustment may be necessary to suit tail stock). The Stellite cutter tip needs to be on centre, or up to 10mm above centre.
- Lastly fit the Morse taper assembly bracket to the rear of the base plate to complete the assembly. Now you can remove the saver until your bowl is ready to be cored.



1. Cutting Blade
2. Tool Post Mount
3. Thrust Pads
4. Base Plate & Tool Post Mount
5. Tail Stock
6. Wooden Bowl Blank

SELECTING YOUR WOOD

Some of the most valuable reasons to core bowls is to get more yield from the wood you have purchased or salvaged, reduce waste, save time and just create more bowls.

It is important to understand every tree species will turn differently. We recommend you trying several different types and finding what you prefer. It is highly recommended you start with wet/green wood.

Some wood will require you to stop and sharpen your cutter several times throughout a core, while others will not, you can tell when sharpening is required when your shavings change to smaller chips. If you are finding the core is giving you trouble, don't be disheartened, instead, try a different species of wood.

Green or wet wood will be easiest to core, however you will need to ensure these cores are larger than needed to allow for shrinkage and the changing of the shape which may occur in the drying process. We recommend making the wall thickness of these cores around 10% of the overall bowl diameter.

FITTING THE BOWL BLANK



A solid tenon on the foot and strong connection with your chuck is critical when coring. Refer to You Tube video *"How to create a Spigot for Bowl coring"*. It can be found on our website under the Support Tab.

- Select your bowl blank and measure the diameter. The following is based on an example of a bowl blank which is 13" (330mm) and a thickness of 4-1/2" (110mm).
- Screw your faceplate to the front of the bowl ready to attach to your lathe. Select a chuck based on the diameter of the bowl. Woodcut Tools recommends that the chuck jaws to be approximately 30% of the diameter of the block held. For our example block we recommend a 4"(100mm) jaw set fitted to a Nova Scroll chuck. It is important to not use too small a set of jaws for the size of the bowl and therefore risk the bowl coming loose.
- Set your lathe to a moderate speed (recommend about 600 rpm) and then mount the bowl to the lathe.
- Adjust the chuck until almost closed, measure the inside diameter with calipers and mark a circle with your pencil on the face of the bowl.

FITTING THE BOWL BLANK

- Using a 3/8" (10mm) gouge or specialist tool cut the spigot accurately to suit the chuck. The spigot height should be approximately 1/4" (6mm).
- Ensure that the face is flat for the chuck to register against.

SHAPING THE BOTTOM OF THE BOWL

- For the bottom of the bowl we recommend the 5/8" (16mm) and 1/2" (13mm) Woodcut Tools replaceable tip bowl gouges.
- Shape the bowl, keep the bevel rubbing and cut with the grain and slice the wood away.
- Now remove the faceplate and fit the bowl squarely in the chuck and tighten firmly.



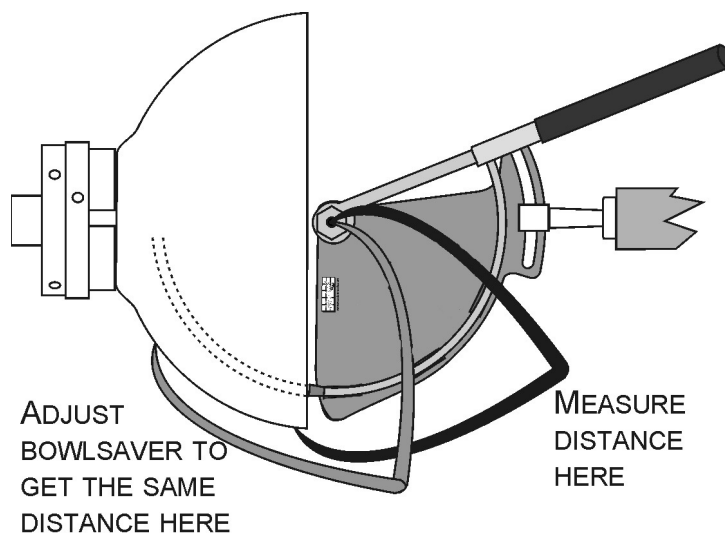
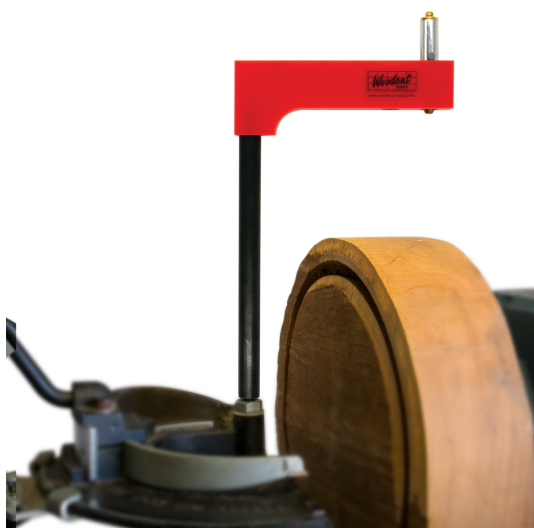
PLANNING

- Proceed to face the front of the bowl and prepare to mark out the bowls you will reclaim. It is important to carefully consider the wood in the mother bowl and the finished shape before marking out the pitch circles on the face of the bowl. The aim is to save as much wood as possible without compromising the largest most valuable bowl.
- Allow a rim of 1" (25mm) for wet wood or 3/4" (19mm) for dry. More can be allowed for a designer rim. Do not let the Bowlsaver dictate the shape of the finished bowl.
- Once you have made a decision mark the pitch circle for that bowl, then divide the rest of the face of the bowl up according to the number of additional bowls that you wish to core out. This will largely depend on the depth of the blank.
- A blank of 3" (75mm) in depth will produce two bowls, a blank of 4" to 5" (100 to 125mm) in depth will safely produce three and a 6" (150mm) blank four.
- Cut a spigot on the front of the blank to enable the core to be remounted for the next bowl.



SETTING UP THE BOWLSAVER TO CUT

- Remove the toolrest from the banjo and replace the bowlsaver back into the banjo, sitting it down on the collar to set the correct height.
- Start off with the larger blade and remove the largest bowl first, then swap over to the smaller blade for the next size down. Bowls under 8"(200mm) cut with the small blade.
- With the Bowlsaver in the toolrest we will now move the whole toolrest and Bowlsaver unit up to the face of the bowl.
- Slide the toolrest across until the tip of the cutter lines up with the pitch circle.
- This is called the point of entry. It is not necessary to have the pivot bolt in the centre of the bowl, however, for optimum stability it is recommended.
- Next set the depth of cut (how far the blade goes into the bowl). You can use the Bowlsaver templates provided to do this. Alternatively calipers can be used for setting the depth, or to make this process even easier purchase the Woodcut Bowlsaver Light Guide, pictured below.



- Place the large gauge against the base of the bowl and move the unit forward until the centre of the bolt is level with the point. Keep the cutter on the point of entry. If this is correct then lock your toolrest firmly.
- Slide your tailstock forward, loosen the wingnut underneath the tailstock bracket fitting, and fit the morse taper into the taper of your tailstock. Lock your tailstock in place and wind the handwheel forward a little to hold the taper firmly in place.
- Double check the tightness of all your mounting points (chuck, toolrest, toolpost, tailstock and the tri-knob underneath). You are now ready to start cutting.

THE FIRST CUT

The Bowlsaver User Support Video available at www.woodcut-tools.com in the User Guides Tab is a great reference.

Coring Tips

1. Some turners prefer to start their bowl core at about 10mm above center. When the bowl core completes the cutter will be at center.
2. It is critical to ensure the front of the cutter is sharp at all times.
3. Woodcut Tools recommends beginning the cut with a lathe speed of 300RPM and increasing the speed as you progress.

- Firstly, once again, make sure that the chuck is tight on the bowl and then start the lathe.
- Check your lathe speed. This will depend upon the size and the balance of the block that you are cutting but use a lower speed to start with.
- The hand positions of the Bowlsaver are quite important. Bring your body close up to the Bowlsaver handle and your left hand can rest and apply downward pressure to the blade. This will help dampen any vibration.
- It is very important that the blade is fed very slowly into the wood (not hesitantly but at steady rate). There is no need to rush this operation. The whole operation will take only 2 to 4 minutes and you can withdraw the blade at any time and start again at the same point where you left off. Take your time and feel your way to prevent binding. Shavings must be removed from the cutting path.

When coring hard, dense wood it is not unusual to sharpen the cutter multiple times during a core.

- The Stellite cutter needs to stay sharp. If the cut becomes difficult or more dust is flying than shavings then stop and sharpen the front of the cutter. (See page 10 for assistance with sharpening)
- As you progress and start to come around into the end grain you'll notice that the shavings will become small, short, little fibrous chips. It's important at this time to stop and clear those shavings so that they don't pack around the blade and put extra strain on your lathe.
- Once cleared carry on as before. From time to time a shaving will sit on top of the cutter and inhibit progress. Simply withdraw the blade, wipe it off and carry on cutting.

THE FIRST CUT

- If coring hard/dense wood we recommend you create a wider channel to give the cutter more clearance. To do this, back out of a cut to enable the chips to clear. When going back to the cut pull gently on the cutter, retract slightly and then push on the cutter creating a wider channel.
- Let the cutter work at it's own pace. The Bowlsaver, used patiently, will do the job as effectively on a light machine as it will on a heavy-duty lathe.
- As you proceed around towards the finish of the cut, listen carefully and you will hear a change in the tone of the cut. This will give you an indication of how much wood is left in the base now to cut off. Stop the lathe at this point.
- Feel the bowl with your fingers and check whether it's almost ready to come off. You may have to do this 2 or 3 times, particularly when you're first starting out with the Bowlsaver, until you get comfortable with it.
- Don't be afraid if you go too far. If the bowl does dislodge, simply switch the lathe off and retrieve the bowl.



THE SECOND CUT

- Proceed to remount the saved bowl using the same procedure as before.
- Create a new spigot on the bottom of the bowl. Re-mount the bowl in the chuck and re-mount the Bowlsaver on the lathe.
- Loosen the clamp bolts and exchange the blades, the small blade now becomes the working blade and the large the lazy blade.
- Tighten the screws firmly and proceed to line up the cutter with the point of entry.
- Take the small gauge and adjust the depth of cut until correct.
- Couple the tailstock to the taper and tighten all the mounting points, including the chuck.
- You may wish to increase the lathe speed to 800 rpm for the smaller bowl.
- Proceed to make the cut as before withdrawing the blade frequently to clear shavings until the bowl is ready to break free.
- Move the unit including the tailstock back and remove the second bowl.

THE FINAL BOWL

- Place the new bowl in the chuck, replace the toolrest and turn a spigot on the base to suit the small chuck (2"-50mm).
- Fit the small chuck, remount the bowl and hollow out the inside with a suitable gouge.
- We suggest you use a 3/8" (10mm) Woodcut Tools Bowl Gouge.
- Now you have three bowls ready to be finished and polished once they have completely seasoned.



BOWL BLANK SHAPE

It is possible to change the shape of your bowl core. A hemispherically shaped bowl blank is typical but you are not restricted to a half-round sphere shape. A bowl can be tall and skinny, half circle, or wider just depending on how the knife angle is adjusted.

This can be achieved by simply sliding the Tailstock along the track of your Bowlsaver.



STELLITE CUTTERS

Your Bowlsaver includes a quality Stellite cutting tip.

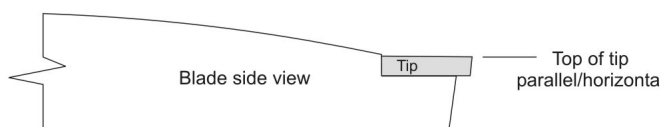
Stellite is commonly used for saw tipped bandsaws and is proven on hard and soft woods. A Stellite cutter delivers an excellent wood finish and experience a long operational life with great wear resistance, cutting up to 500 bowls before needing to be replaced. It uniquely produces large, thick wood shavings. Stellite is tough enough to withstand shocks caused by knots, nails etc.

You will notice that the top of the tip is hollow ground, this is essential to the performance of the tool.

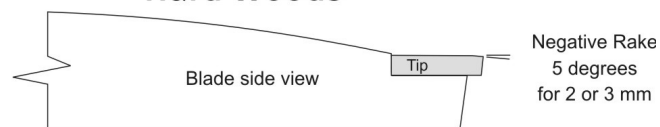


CUTTER MAINTENANCE

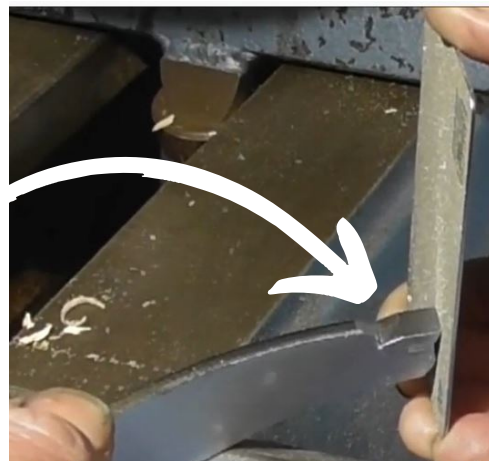
Soft Woods



Hard Woods



Sharpen the front edge of the cutter in circular movements with a credit card hone 5 degrees to 15 degrees to bring up a burr.

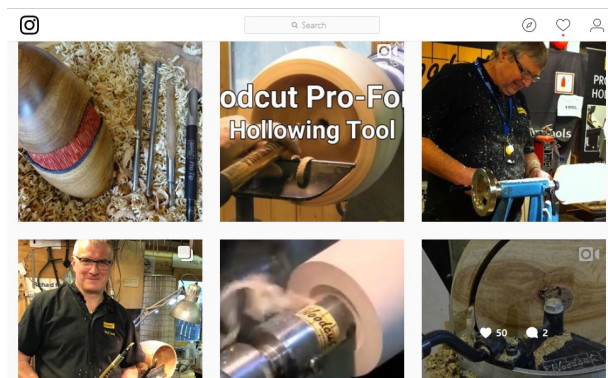


Refer to You Tube video
"How to sharpen Woodcut Bowlsaver cutters".
It can be found on our website under the Support Tab.




Tips can be replaced by a saw doctor who has the ability to braise a replacement Stellite tip available from your local Woodcut Tools distributor alternatively you can purchase a full replacement set of blades.

USER SUPPORT

Please find the Bowlsaver User Support Video at www.woodcut-tools.com in the User Guides Tab.



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

   @woodcuttoolsnz
#woodcutbowlsaver



GENERAL SAFETY RULES

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

We are committed to our products and customers and guarantee our tools against faulty workmanship and faulty materials for twelve months. 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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