KEEPING YOUR SHOP SHARP WITH WORKSHARP™

The Tool Sharpener

A Step-by-Step Guide to Precision Sharpening & Grinding Nearly Everything
Thank You

for purchasing the WORK SHARP tool grinding and sharpening system. We’ve put together these simple tips—along with detailed photographs—to help you create sharper tools and grind more easily and safely. With sharper tools you’ll get higher quality work done and with faster, safer results.

Your WORK SHARP tool sharpener can grind and sharpen just about everything in your shop that gets dull. From specialized tools like wood chisels to everyday tools like lawnmower blades, your WORK SHARP is designed to keep a wide range of tools sharp and on the job.

And, as always, we proudly stand behind every product we make, including the new WORK SHARP tool sharpener. If you have any questions or need further assistance, please visit our website at www.worksharptools.com or call our technical support team in Ashland, Oregon. They are standing by and ready to help you. You can call toll-free at 800-597-6170 or email us at tech@worksharptools.com

And always remember to Work Sharp!

Sincerely,

Hank O’Dougherty
President, Professional Tool Manufacturing, LLC™

Maker of WORK SHARP™, Drill Doctor™, and DAREx™

IMPORTANT

For your own safety, please read the User’s Guide before operating the Work Sharp 2000.
150mm Edge-Vision™ Wheel with solid adhesive-backed abrasives applied

Top Tool Rest for top-side freehand sharpening

Wheel direction indicator

Durable cast aluminum top

Alignment Fence keeps tool square during sharpening

Edge-Vision™ Slotted Wheel allows you to see the cutting edge as you sharpen!

Tool hold-down keeps tool flat during sharpening

Durable cast aluminum top

Chisel & Plane Blade Port is 1 1/8" wide with fixed 25° angle. Heat sink is diamond plated to remove burr.

Air-cooling vent ports for routed air flow cooling

Locking power switch

Durable plastic housing and base

Air-cooling vent ports for routed air flow cooling

Top Knob for securing wheel

Bench mounting tabs

1/8 hp induction motor produces 1750 rpm max. wheel speed

6' grounded power cord

Edge-Vision™ underside Sharpening Port & grit exhaust port

Durable cast aluminum top

Top Knob for securing wheel

Durable cast aluminum top

Air-cooling vent ports for routed air flow cooling

REVIEW THE KEY PARTS OF YOUR WORK SHARP 2000
Wood Chisels

Objective:
Create a sharp chisel with the following features:
- A flat back all the way to the cutting edge
- A square cutting edge
- A 25° bevel angle
- A sharp edge without burr

Where to Sharpen:
- Chisel & Plane Blade Port

Abrasive Selection:
- Rough Shaping: Coarse solid abrasive (P60 – P80 grit)
- Fine Sharpening: Fine solid abrasive (P180 – P320 grit)

Top Tips:
- Do not round off cutting edge while flattening the back of your chisel. Approach wheel at a 45° angle. Remove tool in same manner.
- Use the ‘plunge and pull’ method for best results. Do not hold chisel against the abrasive disk for more than one second.
- Keep chisel FLAT on sharpening port heat sink surface during ‘plunge and pull’ step. The tool hold down bar will assist you.
- Use sharpening port alignment fence to keep the chisel’s cutting edge square during sharpening.
- Let the machine do the work. Do not force or overload machine.

Go from this... to this!
**Method:**

1. Place the coarse grit solid abrasive face up on your tool, flatten the back of your chisel so you have a smooth, consistent finish. This step is critical and should not be overlooked.

2. Now place the coarse grit solid abrasive face down on your tool and plunge and pull your chisel in the sharpening port. This process may take some time (3–10 minutes) based on the degree of damage on the edge of your tool. Do not plunge the chisel against the wheel for longer than one-second intervals or use excessive load or force. This will only create unnecessary heat and a large burr. Follow the light handed ‘plunge pull’ method for fastest, coolest and sharpest results.

3. Once the bevel and cutting edge have been re-established and no longer show signs of damage, sharpen the back and bevel with the fine grit solid abrasive following the same steps as outlined above. This step should only take about a minute.
**Objective:**
Create a sharp plane blade with the following features:
- A flat back all the way to the cutting edge
- A square cutting edge
- A 25° bevel angle
- A sharp edge without burr

**Where to Sharpen:**
- Chisel & Plane Blade Port

**Abrasive Selection:**
- **Rough Shaping:** Coarse solid abrasive (P60 – P80 grit)
- **Fine Sharpening:** Fine solid abrasive (P180 – P320 grit)

**Top Tips:**
- Do not round off cutting edge while flattening the back of your blade. Approach wheel at a 45° angle. Remove tool in same manner.
- Keep plane blade FLAT on sharpening port heat sink surface during ‘plunge and pull’ step. The tool hold down bar will assist you.
- Use sharpening port alignment fence to keep the blade’s cutting edge square during sharpening.
- Finer grits than P220 can be purchased if you wish to have an even sharper edge on your plane blades.
**Method:**

1. Place the fine grit solid abrasive face up on your tool and flatten the back of your blade so you have a smooth, consistent finish. This step is critical and should not be overlooked.

2. Turn the wheel over so the fine grit solid abrasive is facing down then sharpen with the same plunge and pull used for chisels. This process should only take a few minutes.

3. Do not plunge the plane blade against the wheel for longer than one second intervals or use excessive load or force. This will only create unnecessary heat and burr. Follow the light handed ‘plunge pull’ method for fastest, coolest and sharpest results.

- **45° approach**
  - Fine solid abrasive (P180–P320 grit)

- **Flatten back of plane blade**
  - Fine solid abrasive

- **Plunge-and-pull method: Plunge**
  - Fine solid abrasive

- **Plunge-and-pull method: Pull**
  - Fine solid abrasive
Carving Tools: Gouges, V Tools, Skews & More

Objective:
Create a sharp carving tool with the following features:

- A sharp cutting edge
- The bevel away from the cutting edge is at the proper angle for the type of cut the tool is designed for. Small angles cut better at low entry angles. Large angles are better for vertical cutting or chopping.
- The cutting edge is shaped correctly for the cut profile desired.

Note: The goal is to recreate the same geometry as originally supplied by the manufacturer, but with a new sharp edge.

Where to Sharpen:
- Edge-Vision™ Port

Abrasives Selection:
- Fine slotted Edge-Vision™ abrasive (P180 – P320 grit)

Top Tips:
- Use a black marker to color the edge to be sharpened.
- Use a shop/drop light to increase visibility of edge being sharpened.
- Start at the heel of the bevel and work towards the cutting edge.
- Sharpen with carving tool at the 12:00 or 2:00 position in the port to avoid tearing the abrasive.

Generally, the naked eye can’t see the difference between a dull and properly sharpened carving tool—but your work will show the difference!
**Top Tips (cont.):**

- If your tool is not cutting well after sharpening, check the following:
  - The bevel angle may be too steep; try sharpening a shallower angle.
  - The bevel may not have been sharpened all the way to the cutting edge.
  - There may be a burr on the inside of the cutting edge.

**Method:**

1. Place the fine grit slotted Edge-Vision™ abrasive face down and remove the Top Tool Rest for increased visibility.
2. Look down through the spinning wheel into the Edge-Vision™ port.
3. Slowly bring tool to be sharpened into the Edge-Vision™ port and contact the heel of the cutting edge to the abrasive surface.
4. Determine location of area being sharpened by watching where the black marker is being removed from the tool.
5. Slowly move the tool to remove all the black marker.
6. Edge should now be sharp and have an even surface finish.
7. If burr is created on inside edge of gouge, simply remove with a rolled piece of fine sand paper or a fine slip stone.
**Objective:**
Create a sharp lathe tool with the following features:
- A sharp cutting edge with a prominent burr
- A cutting edge that is shaped correctly for the cut profile desired
- **Note:** The goal is to recreate the same geometry as originally supplied by the manufacturer, but with a new sharp edge.

**Where to Sharpen:**
- Edge-Vision™ Port

**Abrasives Selection:**
- Coarse slotted Edge-Vision™ abrasive (P60 – P80 grit)

**Top Tips:**
- Use a black marker to color the edge to be sharpened.
- Use a shop/drop light to increase visibility of edge being sharpened.
- Start at the heel of the bevel and work towards the cutting edge.
- Sharpen with lathe tool at the 2:00 position in the port to create a burr and avoid tearing the abrasive.
- Practice on an older tool before sharpening your favorite lathe tool.
- Creating a burr while sharpening is important for lathe tools to work correctly.

While the naked eye can’t see the burr preferred by lathe tool users, you can definitely feel the difference.
**Method:**

1. Place the coarse grit slotted Edge-Vision™ abrasive face down and remove the Top Tool Rest for increased visibility.
2. Look down through the spinning wheel into the Edge-Vision™ Port.
3. Slowly bring tool to be sharpened into the Edge-Vision™ port at the 2:00 position and contact the heel of the cutting edge to the abrasive surface.
4. Determine location of area being sharpened by watching where the black marker is being removed from the tool.
5. Slowly move the tool to remove all the black marker.
6. Edge should now be sharp and have an even surface finish.

**Using marker to darken edge to be sharpened**

**Sharpening lathe tool in Edge-Vision™ Port (2:00 position)**

Coarse slotted abrasive (P60–P80 grit)
Putty Knives / Scrapers

**Objectives:**
- Create a sharp and clean putty knife or scraper.
- Clean debris and material off blade face.
- Sharpen the edge to appropriate sharpness. **Note:** If a putty knife is too sharp, it will cut into wallboard or soft surfaces. Sharpen only to meet the needs of your project.

**Where to Sharpen:**
- Top Side Sharpening Area

**Abrasive Selection:**
- Fine solid abrasive (P180 – P320 grit)

**Top Tips:**
- Sharpen on the right side of the wheel so wheel spins away from you.
- The coarse solid abrasive may be needed if blade is severely damaged or the surface is covered in material (i.e., glue, cement, spackle, etc.).
Method:

1. Place the fine grit solid abrasive face up on your machine.
2. Lay the blade face flat on the right side of the wheel.
3. Use left hand to apply downward pressure onto tool.
4. Pull tool toward yourself and swipe the tool off the abrasive disk.
5. Flip blade face and repeat on other side.
6. Raise handle of putty knife or scraper to create a beveled edge if desired.
Pry Bars

Objective:
Create a well-functioning pry bar with the following feature:
- A clean beveled edge so you can get underneath or between objects.
- The edge of the bar should not be too thin so that it remains strong.

Where to Sharpen:
- Top Side Sharpening Area

Abrasive Selection:
- Coarse solid abrasive (P60 – P80 grit)

Top Tips:
- Grind a steep bevel angle onto the pry bar for strongest edge.
- Using the Top Tool Rest will help regrind the bevel.

Go from this... 
...to this!
Method:

1. Flatten the back on top of coarse solid abrasive surface.
2. Re-grind the bevel on top of the coarse solid abrasive.

Blade flat on right side of wheel
Coarse solid abrasive (P60–P80 grit)

Turn pry bar over and raise handle
to grind bevel edge
Coarse solid abrasive
Flat Head Screwdrivers

**Objective:**
Create a new tip on a damaged screwdriver.

**Where to Sharpen:**
- Edge-Vision™ Port and top surface

**Abrasive Selection:**
- Fine Slotted Edge-Vision™ Abrasive (P180 – P320 grit)

**Top Tips:**
- Use the Edge-Vision™ Port and abrasives.
- Color the screwdriver tip black to follow progress while grinding.
- Remove the Top Tool Rest to increase visibility.

Go from this...

...to this!
Method:

1. Place the fine slotted abrasive face down on your machine.
2. Flatten both sides of the screwdriver face in the Edge-Vision™ Port.
3. If you need to re-establish the flat tip, grind the tip square using the top side of the grinding wheel near the center.
Cold Chisels & Masonry Chisels

**Objective:**
Create a new double beveled edge on a striking chisel

**Where to Sharpen:**
- Top Side Sharpening Area

**Abrasive Selection:**
- Coarse solid abrasive (P60 – P80 grit)

**Top Tips:**
- Use the Top Tool Rest to increase safety and control.
- Sharpen on the right side of the wheel so the wheel is spinning away from you.
- The Edge-Vision™ Port and coarse grit Edge-Vision abrasives can be used for narrow cold / masonry chisels (see Lathe Tools).
- The edge on a cold chisel should not be sharp like a wood chisel. If it is too sharp, the edge will be fragile and will not last.
- The goal is to create a ‘like new’ edge — sharp enough to get into tight spaces and have a clean beveled edge.
Method:

1. Place the coarse grit solid abrasive face up on your machine.
2. Adjust the Top Tool Rest to a low position above the wheel.
3. Holding chisel firmly, place the chisel on the Top Tool Rest.
4. Slowly lay the chisel cutting edge onto the abrasive disk.
5. Flip chisel and grind the other bevel of the chisel.
6. Repeat until desired finish and sharpness is attained.

Tool on Top Tool Rest
Coarse solid abrasive (P60–P80 grit)
**Re-beveling a Bolt or All-Thread**

**Objective:**
Create a smooth, even bevel around the top thread of a bolt or All-Thread after the material has been cut. This will prep thread to accept a nut.

**Where to Sharpen:**
- Edge-Vision™ Port

**Abrasive Selection:**
- Fine Slotted Edge-Vision™ Abrasive (P180 – P320 grit)

**Top Tips:**
- Use the Edge-Vision™ Port and abrasives.
- Remove the Top Tool Rest to increase visibility.

Go from this... ...to this!
Method:

1. Place the fine slotted abrasive face down on your machine.
2. Bring bolt into Edge-Vision™ Port and gently contact the wheel and roll material so that the lead thread has been beveled and no burr remains.
3. Test the threads with a nut and re-bevel if necessary.
Grinding or Beveling Material on the Top Grinding Surface

**Objective:**
Create a smooth, even bevel on a piece of material

**Where to Sharpen:**
- Top Side Sharpening Area

**Abrasive Selection:**
- **Rough Grinding:** Coarse solid abrasive (P60 – P80 grit)
- **Fine Grinding:** Fine solid abrasive (P180 – P320 grit)

**Top Tips:**
- Use the Top Tool Rest for increased control and safety.
- Grind on the right side of the wheel so the wheel is spinning away from you.
- The outer edge of the wheel has a faster surface speed and will grind material faster, but with more heat. The center of the wheel has a slower surface speed and will grind material slower, but with less heat.
- If you grind close to the tool rest, the material may skew sideways as the surface of the disk is moving to your right. Grinding at the 3 o’clock position on the wheel will provide optimum control; since the wheel is moving away from the edge.
Method:

1. Place the solid abrasive of your choice face up on your machine.
2. Lay material on the Top Tool Rest so it projects over the wheel.
3. Hold material firmly and contact the grinding wheel to bevel material.

Material on Top Tool Rest in 3:00 position
Solid abrasive of your choice
Lawnmower Blades

**Objective:**
Objective: Create a sharp lawnmower blade with the following features:
- No nicks or dents at the cutting edge
- A sharp single bevel edge on both ends of the blade. **Note:** The exact angle of the edge is not critical to cutting performance.

**Where to Sharpen:**
- Top Side Sharpening Area

**Abrasive Selection:**
- Coarse solid abrasive (P60 – P80 Grit)

**Top Tips:**
- Flat lawnmower blades can easily be sharpened on your Work Sharp.
- Use the coarse solid abrasive for fastest results on damaged blades
- Some curved or mulching style blades cannot be fully sharpened on Work Sharp due to their shape. In this case, you have two options:
  - Take the blade to a professional for complete sharpening.
  - Use the Work Sharp to sharpen as much of the blade as possible. This may be enough to make it cut more efficiently.

Go from this...

...to this!
**Method:**

1. Place the coarse grit solid abrasive face up on your machine.
2. Adjust the Top Tool Rest to the low position. Or, in some cases, it may be easier to remove the tool rest.
3. Firmly hold the blade with both hands.
4. Lay the blade cutting edge onto the abrasive disk to grind and flatten the back.
5. Remove blade and inspect area being ground. You may wish to replace the Top Tool Rest in order to make the bevel on the other side of the blade.
6. Continue to sharpen until desired finish and sharpness is attained.
7. Rotate blade and sharpen other side.

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**Flattening back of blade**
Coarse solid abrasive (P60–P80 grit)

**Beveling edge using Top Tool Rest**
Coarse solid abrasive
Aaxes, Hatchets, Splitters & Mauls

Objective:
Create a sharp axe, hatchet or maul with the following features:
- No nicks or dents at the cutting edge
- A sharp edge (The exact angle of the edge is not critical.)
- A radiused or curved cutting edge with a bevel on each side

Where to Sharpen:
- Top Side Sharpening Area

Abrasive Selection:
- Coarse solid abrasive (P60 – P80 grit)

Top Tips:
☑️ Use the Top Tool Rest for best control and safety.
☑️ Use the coarse solid abrasive for fastest results on damaged blades.
☑️ Sharpen equal bevels on each side to create an even cutting edge.
☑️ A steep bevel angle will provide the strongest edge.
Method:

1. Place the coarse grit solid abrasive face up on your machine and adjust the Top Tool Rest to the low position.
2. Firmly hold the axe with both hands and position the axe head onto the Tool Rest.
3. Lay the cutting edge onto the abrasive disk and roll the axe from side to side to contact the entire cutting edge.
4. Remove axe and inspect area being ground. Reposition tool on Top Tool Rest and re-grind as needed.
5. Continue to sharpen until desired finish and sharpness is attained.
6. Flip the axe and sharpen the same bevel on the other side.
Shovels, Hoes & Trowels

🎯 Objective:
Create a shovel with the following features:
- No dents or damage on shovel’s cutting edge
- Creating a sharp new single bevel edge (The exact angle of the edge is not critical.)

🔍 Where to Sharpen:
- Top Side Sharpening Area

❖ Abrasive Selection:
- Coarse solid abrasive (P60 – P80 grit)

💡 Top Tips:
- ✓ Hose off shovel before sharpening to reduce dirt, debris and dust.
- ✓ Hold shovel firmly with both hands to insure safety.
- ✓ Remove Top Tool Rest to increase working area.
- ✓ Due to shovel shape, a freehand method will yield best results.
Method:

1. Place the coarse grit solid abrasive face up on your machine.
2. Sharpen on right side of wheel so it is spinning away from you.
3. Start on the back, right side edge of the shovel and roll the shovel to sharpen the entire surface of the cutting edge.
4. Inspect after first pass to check progress.
5. Re-grind as needed to create a clean, sharp edge on the tool.
Additional Edge-Vision™ grinding wheels and abrasives are available to you from our website, www.worksharptools.com, or at your local Work Sharp retailer. You can also use any standard 6" adhesive-backed abrasive. Trimming will be required to properly fit the Edge-Vision™ wheel.
Your WORK SHARP, The Tool Sharpener, is a great tool...

Now we’d like to introduce you to a couple more great tools that we think you’ll appreciate!

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