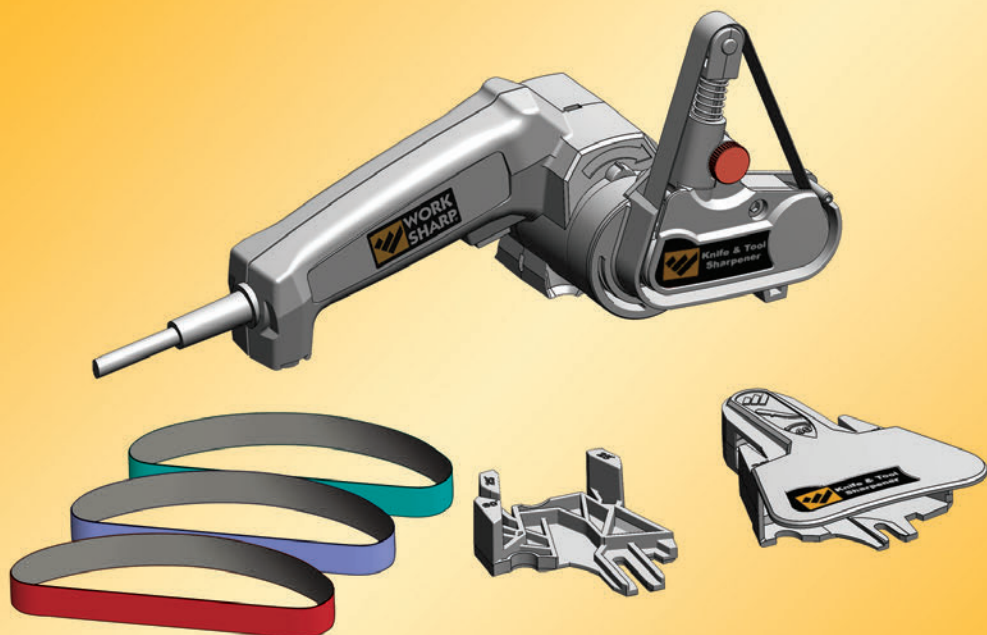




KNIFE & TOOL SHARPENER



WorkSharpTools.com

USER'S GUIDE

⚠ CAUTION! To reduce the risk of injury, the user must read and understand this instruction manual before using product. Save these instructions for future reference.

Safety Information

You will be creating incredibly sharp knives and tools with this sharpener. Please handle them with care. Use caution to avoid cutting yourself.



General Power Tool Safety Warnings

⚠ WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.



Save all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not operate power tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical safety

- a) **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock. (It is recommended that the tool is always supplied via a residual current device with a rated residual current of 30 mA or less.)



3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tool may result in serious personal injury.
- b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries. 
- c) **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress Properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.** Air vents often cover moving parts and should also be avoided.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source before making and adjustments, changing accessories, or storing power tools.** Such preventative safety measures reduce the risk of starting the power tool accidentally.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and belts etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5) Service

- ⚠ Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Darex, LLC

210 E. Hersey St.

Ashland OR 97520

USA

Tel.: 1 (800) 597-6170

Fax.: 1 (541) 552-1377

E-mail: info@darex.com

Internet: www.worksharptools.com

- **Do not dispose of electrical products with household waste.** Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.
- **To replace a damaged power supply cord (Type Y), your power tool must be returned to the Service Center.**



Specific Safety Rules

⚠ WARNING: ALWAYS use proper safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if operation is dusty. **ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:**



⚠ WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber (CCA).

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

⚠ WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/ OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

⚠ CAUTION: Wear appropriate hearing protection during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.

- **Hold tool by insulated gripping surfaces when performing an operation where the abrasive belt may contact hidden wiring or its own cord.** Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.
- **Always hold tool firmly.**
- **Use clamps or another practical way to secure and support the work piece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- **Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth, eyes, or lie on the skin may promote absorption of harmful chemicals.

SAFETY GUIDELINES — DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

- ⚠ DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ⚠ WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
- CAUTION:** Used without the safety alert symbol (⚠) indicates a potentially hazardous situation which, if not avoided, may result in property damage.

The label on your tool may include the following symbols.

- | | |
|--------------------------------------|---|
| V Volt | Aamperes |
| Hz Hertz | Wwatts |
| min minutes | ~alternating current |
| — — — direct current | n_ono load speed |
| □ Class II Construction | ⊕earthing terminal |
| ⚠ safety alert symbol | rpmrevolutions or
reciprocations per minute |

Motor

Be sure your power supply agrees with nameplate marking. 110 Volts AC only means your tool will operate on standard 60 Hz household power. Do not operate AC tools on DC. A rating of 110 volts AC/DC means that your tool will operate on standard 60 Hz AC or DC power. This information is printed on the nameplate. Lower voltage will cause loss of power and can result in over-heating.

Extension Cords

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

SAVE THESE INSTRUCTIONS

Minimum Gauge for Cord Sets					
Volt		Total Length of Cord in Feet			
120V		0 - 25 (0-7.6 m)	26-50- (7.6-15.2 m)	51-100 (15.2-30.4 m)	101-150 (30.4-45.7 m)
230V		0 - 50 (0-15.2 m)	51-100 (15.2-30.4 m)	101-200 (30.4-60.9 m)	201-300 (60.9-91.4 m)
Ampere Rating		American Wire Gauge			
More Than	Not More Than				
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Recommended	

Noise and Vibration Measurements:

Noise (measured values per EN IEC 60745-2-4; IEC 60745-1; EN ISO 3744)	
A-weighted sound pressure level Lpa	65db(A)
Uncertainty factor K	0.1
A-weighted sound power level Lwa	65db(A)
Uncertainty factor K	0.2

Intended Uses:

- Grinding, Sharpening and Honing applications on knives and tools.
- Light duty grinding in metal.
- Only for use with consumer applications.
- Tool should only be used with sharpening cassette installed.

Unintended Uses:

- Industrial or commercial grinding or sharpening applications.
- Extended, continuous heavy duty use beyond 20 minutes per hour.

Troubleshooting:

a) **Problem:** The tips of my knives are becoming rounded.

Solution 1: Stopping the tip on the belt while powering down the tool will reduce tip rounding.

Solution 2: Keep the blade edge perpendicular to the belt to reduce tip rounding.

b) **Problem:** The belt is cutting into the guide or sharpening cassette.

Solution 1: With the sharpening guide removed, used the red belt tracking knob to re-adjust the belt position to center of the pulley.

c) **Problem:** How do I feel for a burr at the cutting edge to know when to proceed from P220 to 6000?

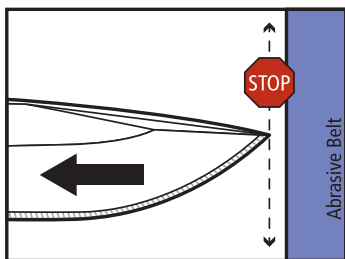
Solution 1: Slide your finger perpendicular and away from the cutting edge. The burr will feel like a small 'ridge' or 'wire' at the edge.

d) **Problem:** My knives are cutting into my sharpening guides.

Solution 1: Use much lighter pressure in the sharpening guides. Using only the weight of the blade while in the sharpening guide provides best results.

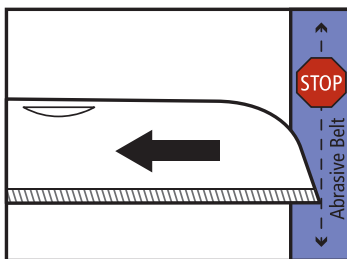
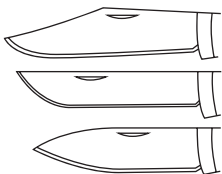
Best Techniques:

Maintain factory blade profile / shape:



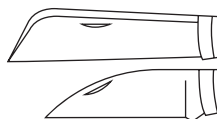
Pull straight through the guide and stop **PAST** the belt. Do not lift the blade handle.

Use this technique for these blade types:



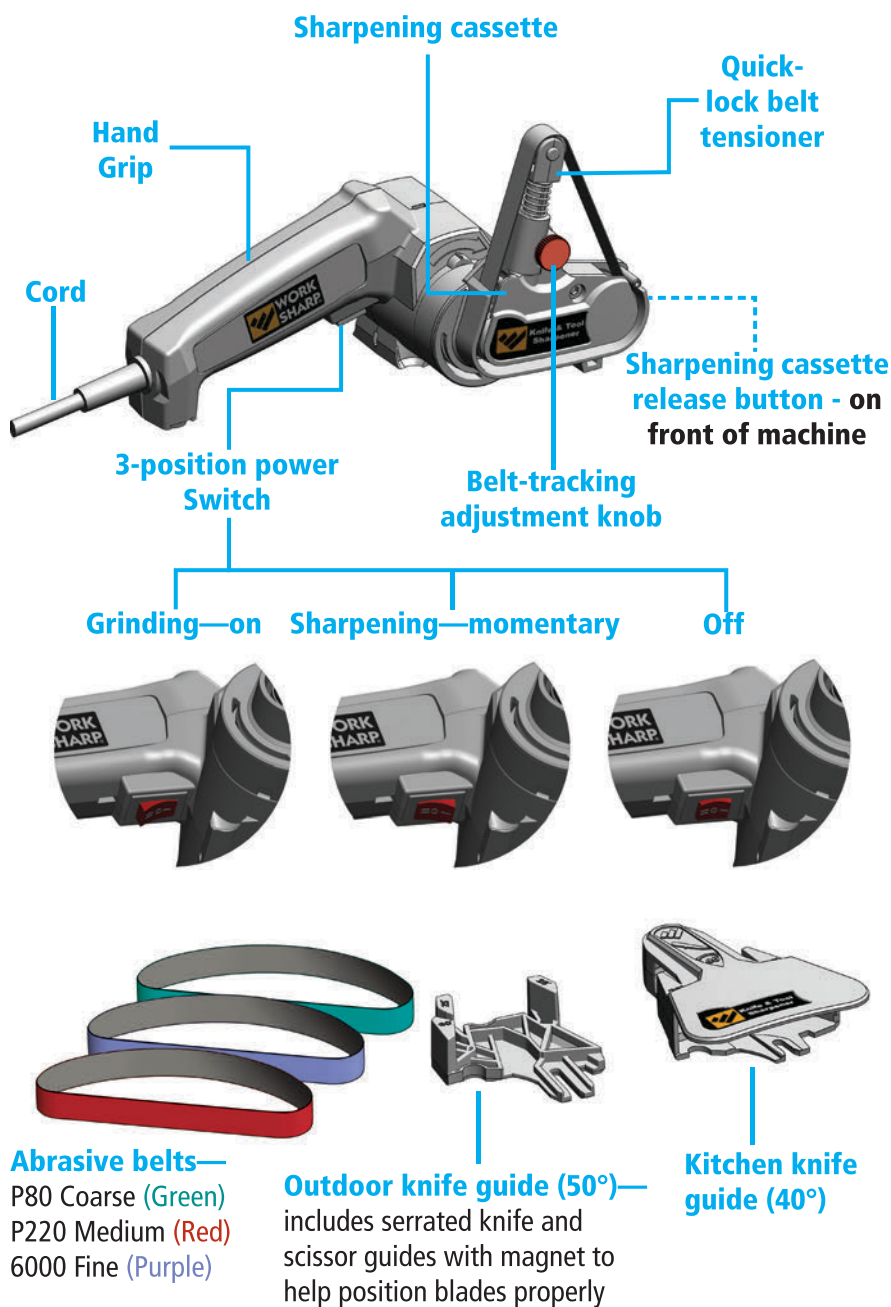
Pull straight through the guide and stop **ON** the middle of the belt. Do not lift the blade handle. Turn power off as knife tip contacts belt.

Use this technique for these blade types:



1

Getting to Know Your Knife & Tool Sharpener

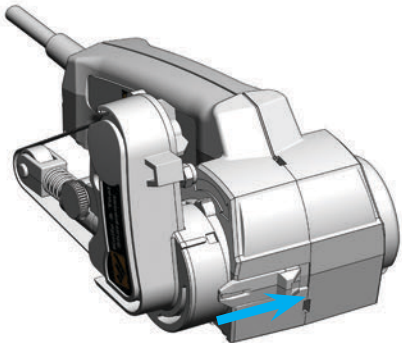


2

Setting Up Your Knife & Tool Sharpener

Step 1

Slide sharpening cassette release button as shown to rotate sharpening cassette from “parked” position.



Then rotate the cassette to **sharpening (A)** or **grinding (B)**.



(A) Sharpen



(B) Grind

Step 2

Install desired belt.

BELT SELECTION GUIDE		
Coarse PP0002454	P80 GREEN	for grinding and sharpening most tools
Medium PP0002515	P220 RED	for knife & scissor sharpening
Fine PP0002409	6000 PURPLE	for honing knives

Abrasive belt dimensions: $\frac{1}{2}$ " x 12"

Belt weight: .10 ounces

For Replacement abrasive belts, contact:

Darex, LLC

Tel: 1(800) 597-6170

E-mail: techsupport2@darex.com

Internet: www.worksharptools.com

These engineered abrasives are long lasting and should meet your sharpening needs. They will last longer than you think.

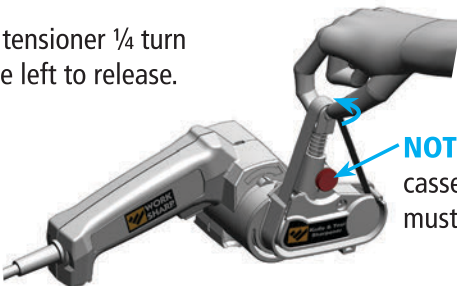
Push tensioner down and make $\frac{1}{4}$ turn to the right to lock in place.



Center belt on all three pulleys.



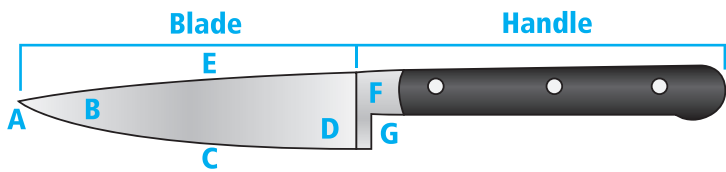
Turn tensioner $\frac{1}{4}$ turn to the left to release.



NOTE: Use red knob on sharpening cassette to adjust belt tracking. Belt must be centered on all 3 pulleys.

3

The Anatomy of a Knife



- A. Point** The very end of the knife, which is used for piercing
- B. Tip** The first third of the blade (approximately) which is used for small or delicate work
- C. Edge** The cutting surface of the knife, which extends from the point to the heel
- D. Heel** The rear part of the blade, used for cutting activities that require more force
- E. Spine** The top, thicker portion of the blade, which adds weight and strength
- F. Bolster** The thick metal portion joining the handle and the blade, which adds weight and balance and keeps the user's hand from slipping
- G. Finger Guard** The portion of the bolster that keeps the user's hand from slipping onto the blade

**You are now Ready
to Sharpen/Grind**

4

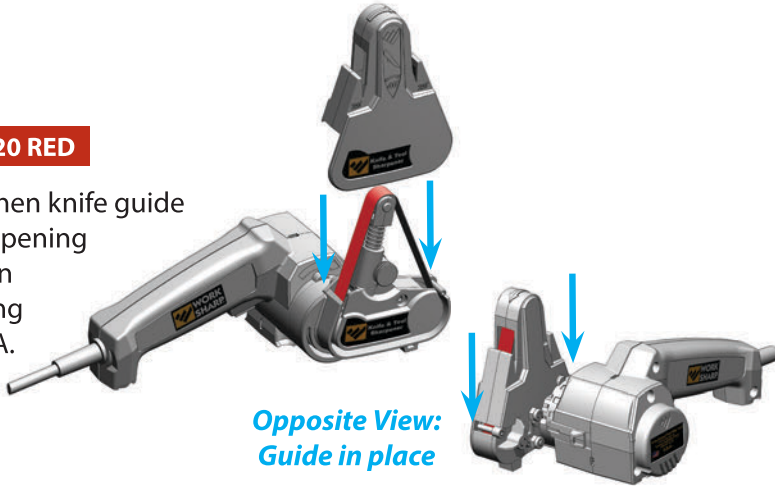
Sharpening Kitchen Knives

Smooth-edged kitchen knives

Step 1

Belt: P220 RED

Slide kitchen knife guide onto sharpening cassette in sharpening position A.

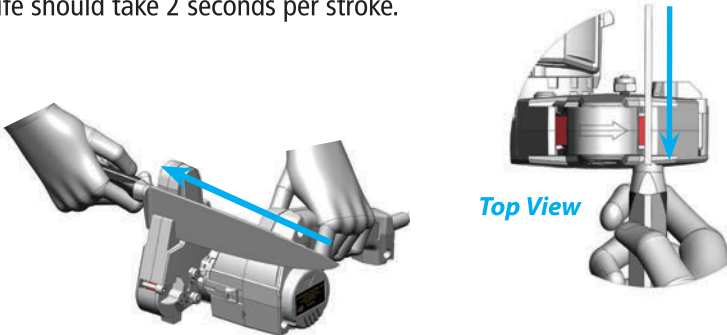


Step 2

With knife in guide, squeeze power switch, and pull knife straight and steadily through guide from bolster to point of blade.

TIP: Keep blade against outer edge of guide as shown.

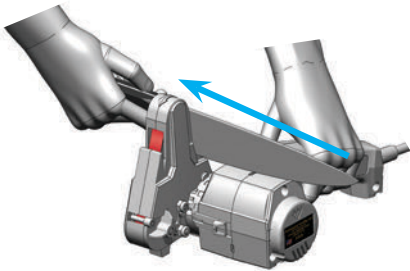
8-in. knife should take 2 seconds per stroke.



Note: proper knife-sharpening position: blade against outer edge of guide. Place knife blade in the guide so that the side of blade is firmly against the outside edge of the guide slot. Insert knife blade all the way to the bolster / finger guard.

Step 3

Repeat Step 2 now using the left side of guide. **Repeat steps 2 and 3 for 5 strokes per side (10 total strokes).**



Your knife should now be “tomato sharp”.

If you choose, you can proceed with the **purple 6000 grit belt** and hone the edge for even sharper results!

Step 4

Belt: **6000 PURPLE**

Remove **red belt**, install **purple belt**. Hone knife. Repeat Steps 2 & 3 alternating evenly until knife is honed (5 strokes per side, 10 total strokes).

NOTE: When re-sharpening, use the **red belt** for 1 to 2 strokes per side, then the **purple belt** for 5 honing strokes per side.

SHARPEN		RE-SHARPEN	
P220 RED	6000 PURPLE	P220 RED	6000 PURPLE
× 10	× 10	× 2	× 10

5

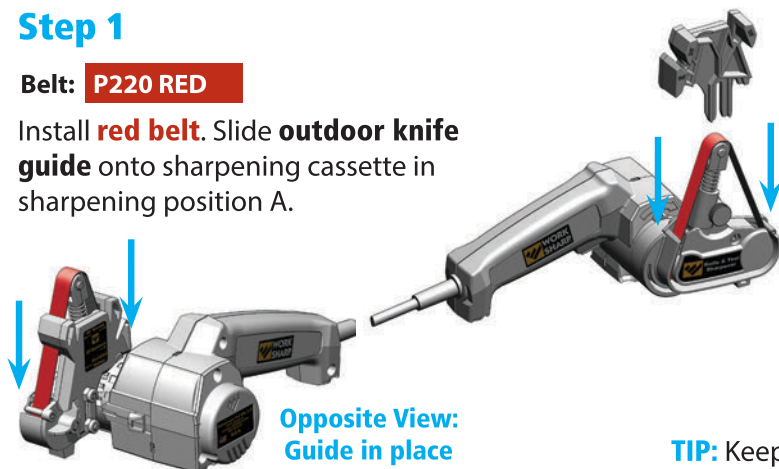
Sharpening Outdoor Knives

Pocket knives, hunting knives, combination serrated blades, filet knives, etc

Step 1

Belt: **P220 RED**

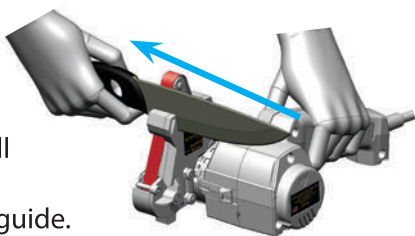
Install **red belt**. Slide **outdoor knife guide** onto sharpening cassette in sharpening position A.



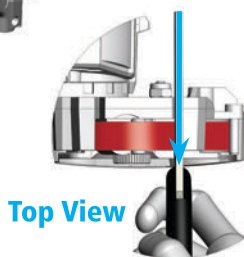
TIP: Keep blade against outer edge of guide as shown.

Step 2

With knife in guide, squeeze power switch; pull knife straight and steadily through guide.



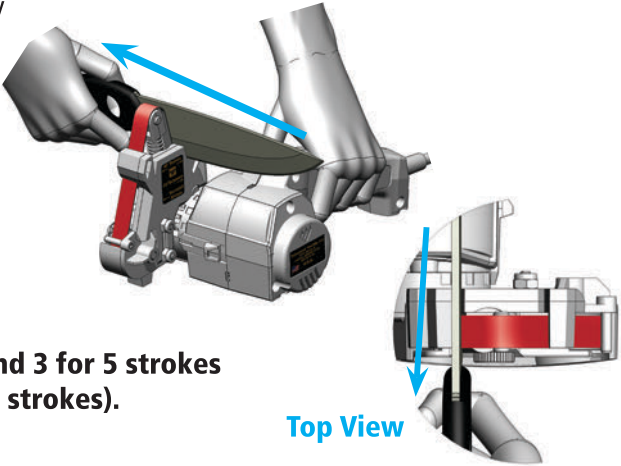
4-in. knife should take 1 second per stroke.



NOTE: proper knife-sharpening position: blade against outer edge of guide. Place knife blade in the guide so that the side of blade is firmly against the outside edge of the guide slot. Insert knife blade all the way to the bolster / finger guard. If the blade has serrations, insert it up to the first serration.

Step 3

Repeat Step 2 now using the left side of guide.



Repeat steps 2 and 3 for 5 strokes per side (10 total strokes).

Your knife should now be “rope-cutting sharp”.

If you choose, you can proceed with the **purple 6000 grit belt** and hone the edge for even sharper results!

Step 4

Belt: 6000 PURPLE

Remove **red belt**, install **purple belt**. Hone knife. Repeat Steps 2 & 3 alternating evenly until knife is honed (5 strokes per side, 10 total strokes).

NOTE: When re-sharpening, use the red belt for 1 to 2 strokes per side, then the **purple belt** for 5 honing strokes per side.

SHARPEN		RE-SHARPEN	
P220 RED	6000 PURPLE	P220 RED	6000 PURPLE
× 10	× 10	× 2	× 10

6

Sharpening Serrated Knives

NOTE: Serrated knives have a flat side and a bevel side on the blade; **sharpen only the flat side with your WS Knife & Tool Sharpener.**



Flat Side



Beveled Side

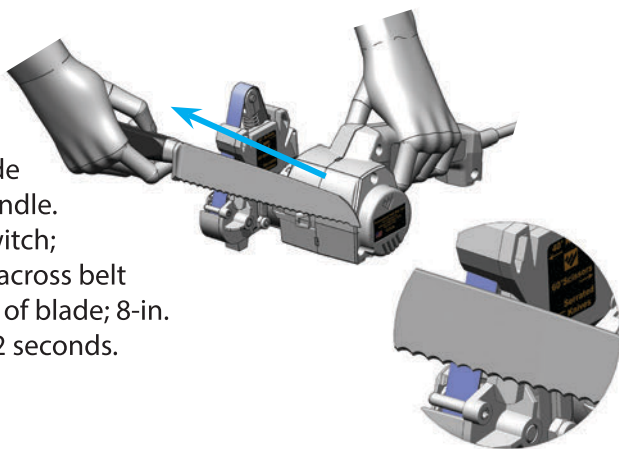
Step 1

Belt: 6000 PURPLE

Install **purple belt**; install **outdoor knife guide** (includes serrated guide).

Step 2

Place flat side of blade against the serrated knife guide at the bolster / handle. Squeeze power switch; pull knife steadily across belt from bolster to tip of blade; 8-in. knife should take 2 seconds.



NOTE: proper serrated-blade position: only place serrated blades on downhill / right side of belt; otherwise, you risk cutting the belt.

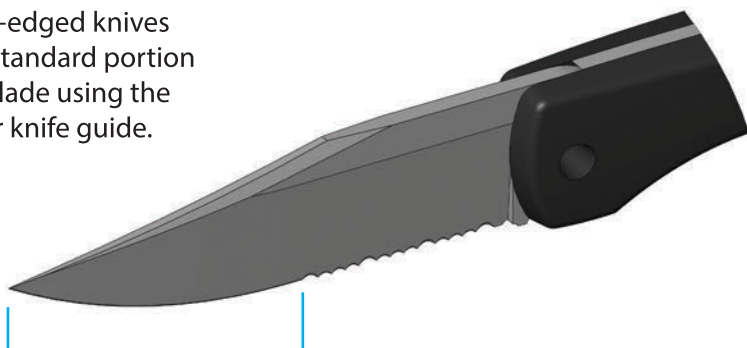
Repeat 2 to 3 strokes.

7

Sharpening Knives with Partial Serration

Step 1

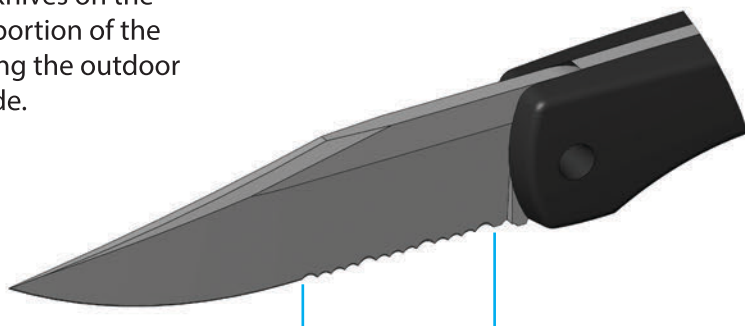
Follow instructions for smooth-edged knives on the standard portion of the blade using the outdoor knife guide.



Use outdoor guide with this portion of blade.

Step 2

Follow instructions for serrated knives on the serrated portion of the blade using the outdoor knife guide.



Use serrated guide with this portion of blade.

8

Sharpening Hunting Knives with Gut Hook & Blades with Deep Concave Curves

Step 1

Follow instructions for smooth-edged knives on the standard portion of the blade using the **outdoor knife guide**.

Step 2

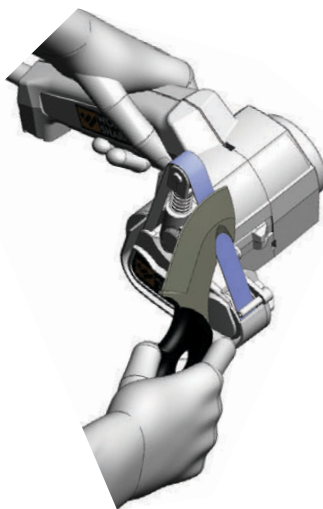
Belt: 6000 PURPLE

To sharpen the gut hook, remove knife guide; install **purple belt**.

Step 3

Place curve of gut hook over the belt on downhill side; allow belt to conform to blade's curve.

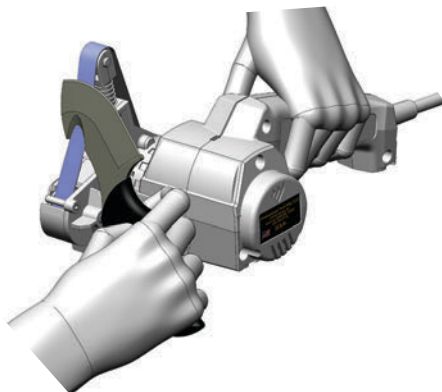
Squeeze power switch; hone 2 to 4 seconds.



Step 4

Repeat on other side of gut hook.

NOTE: Only use the downhill / right side of the belt or you will cut the belt.



9

Sharpening Single-Bevel Knives / Filet Knives

Step 1

Belt: **P220 RED**

Follow instructions for smooth-edged knives on the beveled side of the blade using the outdoor knife guide and the **red P220 belt**. Continue until a slight burr develops on the flat side (usually 5 strokes.)

Step 2

Belt: **6000 PURPLE**

Install **purple belt** and hone beveled side of the blade; continue using the outdoor knife guide

Step 3

Hone flat side of the blade using the serrated guide; continue using the outdoor knife guide.

TIP: It may be necessary to repeat this alternating process of bevel sharpening and back honing to achieve the sharpest results (no burr).

10

Sharpening Scissors

NOTE: Sharpen only the beveled side of your scissors; marking the beveled side with a black marker will make it easier to see when the cutting edge has been sharpened.

Step 1

Belt: **P220 RED**

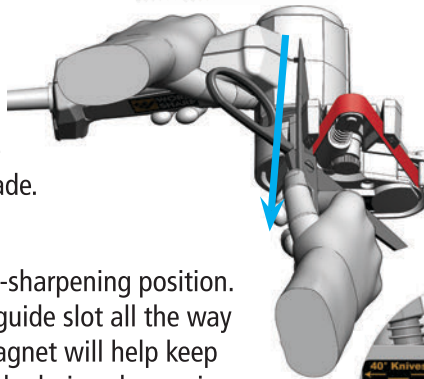
Install the **red P220 belt** and the outdoor knife guide (includes scissor guide).



Hold scissors as shown to keep blades open during sharpening.

Step 2

Pull scissors steadily through guide along full length of blade.



NOTE: proper scissors-sharpening position. Place scissor blade in guide slot all the way to the hinge. Guide magnet will help keep the blade flat and stable during sharpening.



Scissor Guide

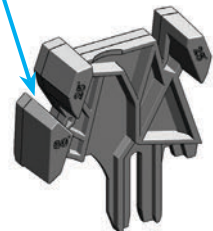
Magnet

Step 3

Repeat Step 2 about 5 times or until black marker is sharpened off at the cutting edge.

Step 4

Repeat Steps 1 to 3 on other scissors blade. Test scissors, repeat as needed.



11

Sharpening Tools

Shovels, Hoes, Axes, Pick Axes, Post-Hole Diggers, & Other Edged Tools

NOTE: Tools such as these do not require sharpening to a precise angle; just let the belt conform to the edge of the tool. It will take longer to restore an edge to severely damaged tools.

Step 1

Belt: **P80 GREEN**

Remove knife guide, install **green belt**; move sharpening cassette to **grinding position B**.

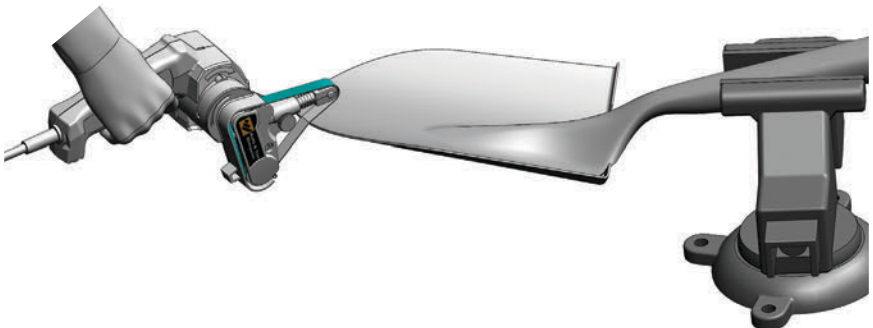


Step 2

Clamp tool to be sharpened securely in bench vise.



Squeeze power switch; grind edge of tool until you are satisfied with the sharpness.



12

Sharpening Tools

Pruners, Shears, & Other Bypass Cutting Tools

NOTE: These tools usually have only one sharp, beveled blade.

Re-sharpen ONLY the beveled blade. These tools do not require sharpening to a precise angle; just let the belt conform to the edge of the tool.

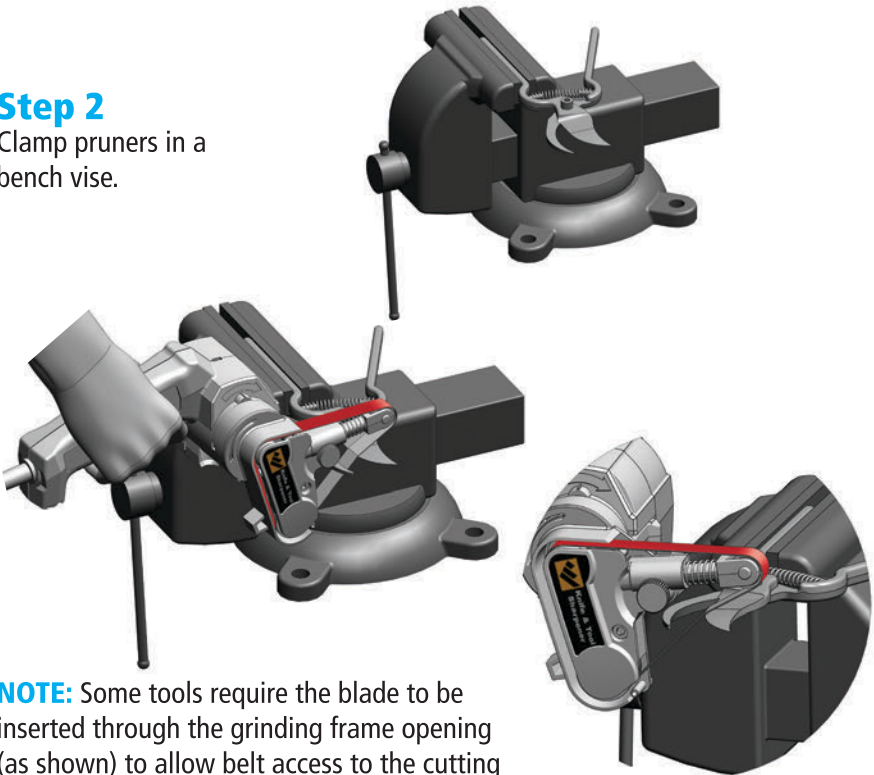
Step 1

Belt: **P220 RED**

Remove guide, install **red belt**; move sharpening cassette to **grinding position B**.

Step 2

Clamp pruners in a bench vise.



NOTE: Some tools require the blade to be inserted through the grinding frame opening (as shown) to allow belt access to the cutting edge.

Repeat 2 to 4 strokes or until you are satisfied with the sharpness.

13

Sharpening Tools

Lawnmower Blades, Straight & Curved (Mulching) Blades

NOTE: Lawnmower blades do not require sharpening to a precise angle; just let the belt conform to the shape of the blade edge, whether straight or curved.

Step 1

Remove blade from mower following manufacturer's instructions; secure blade in bench vise.



Step 2

Belt: **P80 GREEN**

Remove knife guide, install **green belt**; move sharpening cassette to grinding position B; grind edge until you are satisfied with the sharpness.



Step 3

Unclamp blade, rotate 180° and sharpen other side of blade.

Step 4

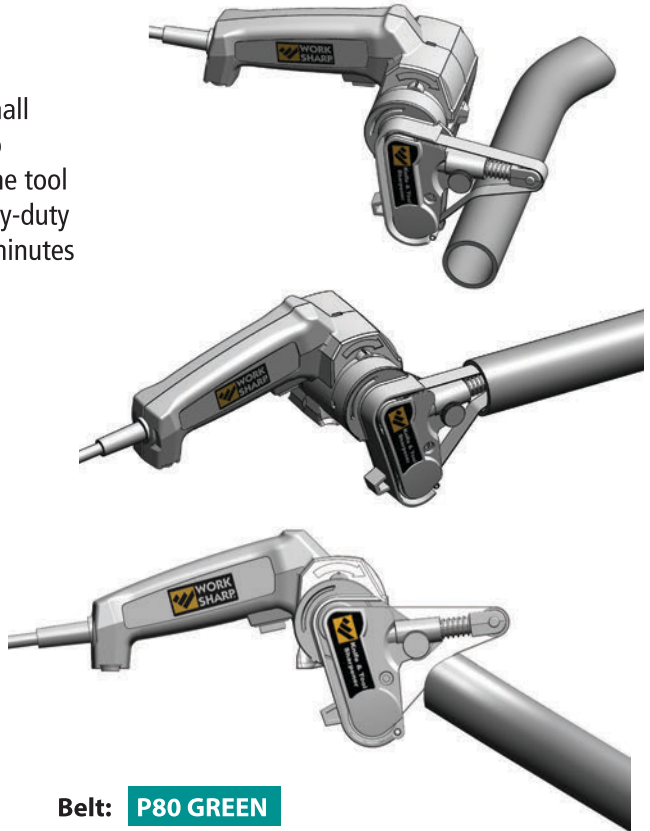
Balance blade to manufacturer's specifications and reinstall on lawnmower following manufacturer's instructions.

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Grinding, Polishing, Deburring

The **WS Knife & Tool Sharpener** is the ideal handheld grinder for small tasks, from deburring to polishing. Remember, the tool is not intended for heavy-duty use; do not exceed 20 minutes use in 1 hour.

- Deburr tubing
- Grinding metal
- Grinding plastic
- Sanding wood
- Automotive fabrication
- Any detail grinding task



Belt: **P80 GREEN**
Grinding position **B**

WARRANTY

1-year warranty on all **WORK SHARP®** components; excludes abrasives.
Warranty for consumer not industrial use.

Complete and mail back the Warranty Registration in the **WORK SHARP®** box, or register online:

Darex, LLC
P.O. 730
210 E Hersey St
Ashland OR, 97520, USA

Or online registration at: <http://www.worksharptools.com>



KNIFE & TOOL SHARPENER

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E-mail: info@darex.com

Internet: www.worksharptools.com

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